

AMRO Annual Consultation Report

Thailand - 2019

Acknowledgments

1. This Annual Consultation Report on Thailand has been prepared in accordance with the functions of AMRO to monitor and assess the macroeconomic status and financial soundness of its members; identify relevant risks and vulnerabilities; report these to member authorities; and if requested, assist them in mitigating these risks through the timely formulation of policy recommendations. This is being done in accordance with Article 3(a) and (b) of the AMRO Agreement.
2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Thailand from 13-23 August 2019 (Article 5 (b) of AMRO Agreement). The AMRO Mission team was headed by Dr Jae Young Lee, Group Head and Lead Economist. Mission members include Dr Ruperto Pagaura Majuca (Country Economist for Thailand), Ms Wanwisa May Vorrarikulkij (Specialist and Back-up Economist for Thailand), Dr Jade Vichyanond (Economist and Back-up Economist for Thailand), Mr Yang-Hyeon Yang (Senior Economist), Ms Pyae Nandar Aung (Associate) and Ms Nyaung Tai (Associate). AMRO Director Toshinori Doi and Chief Economist Dr Hoe Ee Khor also participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Thailand for 2019 was prepared by Dr Jae Young Lee, Dr Ruperto Pagaura Majuca, Ms Wanwisa May Vorrarikulkij, Mr Yang-Hyeon Yang, Dr Jade Vichyanond, and Ms Pyae Nandar Aung; peer reviewed by Dr Chaipat Poonpatpibul (Group Head and Lead Economist) and Dr Tanyasorn Ekapirak (Researcher); and approved by Dr Hoe Ee Khor.
3. The analysis in this Report is based on information available up to 22 November 2019.
4. By making any designation of or reference to a particular territory or geographical area, or by using the term “member” or “country” in this Report, AMRO does not intend to make any judgements as to the legal or other status of any territory or area.
5. No part of this material may be disclosed unless so approved under the AMRO Agreement.
6. On behalf of AMRO, the Mission team wishes to thank the Thailand authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

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Executive Summary

1. **Thailand's economy slowed from 4.1 percent in 2018 to 2.5 percent in the first three quarters of 2019 due to a decline in exports amid U.S.-China trade tensions, as well as a slowdown in private investment.** Going forward, the economy is expected to remain soft and projected to grow below potential, at 2.7 percent in 2019 and 3.1 percent 2020. Overall, the contribution of the external sector to growth is expected to be moderate. While domestic demand is expected to be the main driver of growth, it is also likely to remain soft.
2. **Inflation remains low and subdued.** Year-to-date, headline inflation softened to an average of 0.7 percent in October, from 1.1 percent in 2018, driven by the decline in oil prices as well as the softening of core inflation. Going forward, inflationary pressure is expected to be subdued reflecting the weak economic conditions and low oil prices, and headline inflation is projected to average 0.8 percent in 2019, and 1.0 percent in 2020, around the lower bound of the inflation targeting band.
3. **The external position remains strong, underpinned by the sizable current account surplus and substantial international reserves.** The current account surplus widened in the first nine months of 2019, as imports contracted more than exports. Reflecting the strong external position, the baht has appreciated by more than 6.0 percent against the USD since the beginning of the year.
4. **While fiscal policy remains supportive of economic growth, the fiscal deficit is budgeted to narrow from 3.0 percent of GDP in FY2018 to 2.6 percent in FY2020.** As a percentage of GDP, revenue has been declining since FY2016 due to changes in tax policy and low tax buoyancy, but has been offset by an even bigger decline in expenditure. Budget disbursement has remained low in FY2018 and FY2019, particularly for capital expenditure.
5. **Downside risks to growth continue to stem mainly from a further escalation of trade conflict between the U.S. and China.** While there are early signs of positive trade diversion and investment relocation to Thailand as a result of the U.S.-China trade conflict, the negative spillover effects of the trade conflict have hitherto outweighed the positive trade and investment diversion effects, which are as yet incipient but are expected to increase over time. Aside from risks on the external front, domestic factors, including the delay in passing the FY2020 budget, can weigh on growth.
6. **Risks to financial stability remain contained, although some pockets of risk remain.** The moderation in loan growth and the reduction in the minimum retail rate, together with largely flat savings deposit rate, may put pressure on the banks' profitability. The debt servicing capacity of the SMEs may deteriorate amid the economic slowdown, which may

lead to a further increase in the NPL ratio of the SME segment. The NPL ratio of SFIs has been on a rising trend since Q1 2018. The household debt to GDP ratio, which is high compared to regional peers, has increased somewhat recently. The search-for-yield behavior of domestic investors under a prolonged period of low interest rate environment requires continued vigilance. The baht has appreciated compared to regional peer currencies, which could pose a downside risk to exports and tourism.

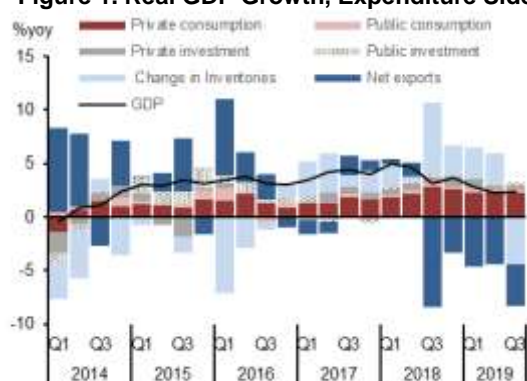
7. **With a very low fertility rate, Thailand is aging at a relatively fast pace and is faced with the challenge of “getting old before getting rich”.** Thailand’s labor force participation rate has started declining since 2012 with a consequent reduction in the contribution of labor to Thailand’s potential growth, which has been partially offset by the influx of migrant workers from neighboring countries.
8. **Given the challenging global economic environment and easing global monetary conditions, Thailand should adopt more expansionary fiscal and monetary policies to support the weak economy, while employing macroprudential measures to address the pockets of risk in the financial sector.**
9. **Fiscal policy can be more expansionary, and should prioritize infrastructure investment and facilitate structural reforms in order to lift the growth potential and enhance the social security system to prepare for the aging population.** The authorities should exert efforts to pass the FY2020 budget in a timely manner, to avoid delays in implementation of mega-infrastructure projects. Given that the economy is operating below potential, fiscal spending should be countercyclical and front-loaded, while at the same time prioritizing infrastructure investment and facilitating structural reforms in order to enhance the growth potential.
10. **The current monetary policy stance is appropriate in supporting growth amid low inflation and a strong external position.** The low inflation and weak growth prospects amid strong external headwinds warrant continued vigilance and proactive policy response if needed. The authorities have taken significant macroprudential measures to safeguard financial stability. Although some pockets of financial stability risks remain, they can be addressed by implementing the planned release of new measures. Against this background, monetary policy can focus more on supporting growth, which has fallen below potential, and the rise of headline inflation toward the target.
11. **The Thailand 4.0 scheme and the EEC flagship projects are key strategic initiatives, and their implementation should be ramped up.** Efforts to enhance potential growth should be continued in order to achieve the goal of becoming a high income developed country as aspired to under the 20-year National Strategy. To further strengthen growth potential, the services sector can be further liberalized to attract more investment and encourage the development of higher value added services based on digital technology.

A. Recent Developments and Outlook

A.1 Real Sector

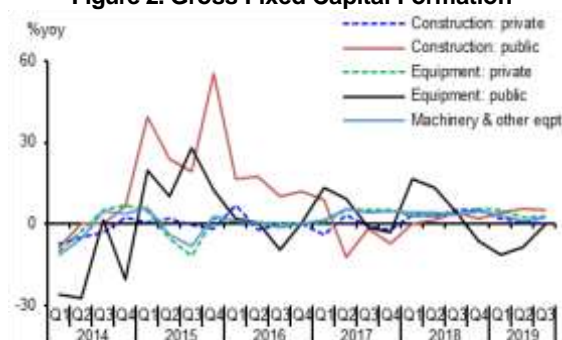
1. **Thailand's economy has slowed due to a decline in exports amid heightening U.S.-China trade tension, as well as a slowdown in private investment.** In the first three quarters of 2019, Thailand's GDP growth slowed more than expected to 2.5 percent from 4.1 percent in 2018, as exports contracted sharply amid US-China trade conflict and private investment moderated amid domestic political uncertainty (Figure 1). Exports of goods contracted sharply amid escalating US-China trade conflict and a prolonged downturn in the electronics cycle. Exports of services also contracted, mainly on account of a decline in foreign tourist arrivals, particularly Chinese tourists after a major ferry accident in Phuket. Private investment also moderated (Figure 2) as domestic election uncertainty caused investors to adopt a wait-and-see attitude, while public investment fell due to the prolonged transition in forming the government. Relative to the second half of 2018, private consumption also softened somewhat (see Figure 3) due to the slowing economy and subdued farm income. Moreover, household consumption remained constrained by high leverage. However, the additional round of the government's welfare card program for low-income earners, helped to alleviate the slowdown in private consumption.

Figure 1. Real GDP Growth, Expenditure Side



Source: CEIC; National Economic and Social Development Council

Figure 2. Gross Fixed Capital Formation



Source: CEIC; National Economic and Social Development Council

2. **On the production side, there was broad moderation across most sectors (Figure 4).** Manufacturing sector decelerated sharply to -0.3 percent growth in the first three quarters of 2019 (from 3.0 percent in 2018) amid significant contraction in export-oriented industries, reflecting the trade conflict and global economic slowdown. Meanwhile, the agricultural sector decelerated sharply to 0.6 percent growth as the dry weather affected the production of major crops. The accommodation and food service sector moderated to 5.0 percent growth, and the wholesale and retail trade sector decelerated to 6.2 percent, amid a slowdown in tourist arrivals and private consumption. The transportation and storage sector

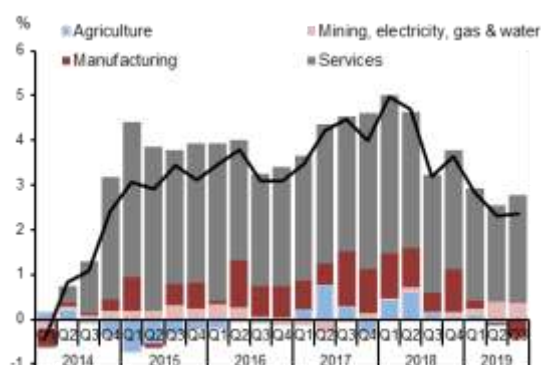
softened to 2.8 percent as land and air transportation slowed down and freight water transport declined.

Figure 3. Private Consumption Indicators



Source: CEIC; Bank of Thailand; University of the Thai Chamber of Commerce

Figure 4. Real GDP Growth, Supply Side



Source: National Economic and Social Development Council

3. **Going forward, the economy is expected to remain soft and projected to grow below potential, at 2.7 percent in 2019 and 3.1 percent in 2020.** The U.S.-China trade tension has remained heightened, and global growth prospects have moderated, which have had a dampening effect on the Thai economy. The rebound of tourism has been slower than anticipated. Going forward, the Thai baht strength and soft external environment may pose challenges, although overall tourist receipts may see a rebound in the coming months, with help from government measures to revitalize tourism, including the waiver of visa fees for several countries. Overall, the contribution of the external sector to growth is expected to moderate. While domestic demand is expected to be the main driver for growth, it is also likely to remain soft (see consumption and investment indicators in Appendix Figure 1.1), reflecting domestic political uncertainties and the ongoing trade conflict. In addition, the Q3 2019 flooding brought by tropical storm Podul, may affect crop output and farmers' income in the short term.

Authorities' Views

4. **The authorities expect 2019 GDP growth to come in stronger, at around 3.0 percent.** The Office of the National Economic and Social Development Council (NESDC) forecasts 2019 growth at 2.7 to 3.2 percent, with the midpoint at 3.0 percent.¹ Meanwhile, the Ministry of Finance (MOF) estimates that growth will come in at around 3.0 percent, and following the THB 316 billion fiscal stimulus package announced in August, 2019, growth may rise to 3.5 percent. The Bank of Thailand (BOT) forecasts 2.8 percent growth in 2019 and 3.3 percent in 2020.

¹ This forecast has been subsequently revised down to 2.6 percent.

A.2 Inflation and Monetary Policy

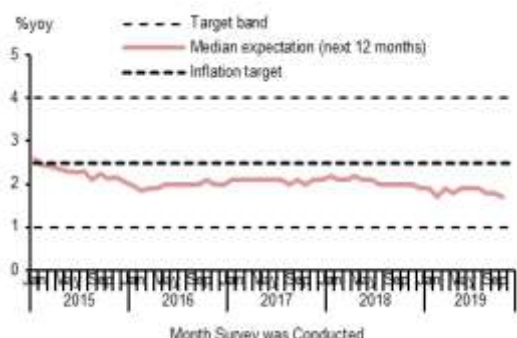
5. **Inflation has remained low and subdued.** Year-to-date, headline inflation softened to an average of 0.7 percent in October, from 1.1 percent in 2018, driven by the decline of oil prices as well as the softening of core inflation (Figure 5). Meanwhile, fresh food prices increased by an average of 4.4 percent in the first ten months of 2019, a reversal from a decline of 0.6 percent inflation in 2018. Core inflation has been generally trending down since June 2018, reaching 0.4 percent in October 2019, partly reflecting weakening demand conditions.² According to BOT's survey, although the median inflation expectation by firms for the next 12 months falls within the BOT's inflation target range, it is below the midpoint and has been trending downward (Figure 6). Going forward, inflationary pressure is expected to remain soft owing to the weak economic conditions and low oil prices (see Selected Issue 1: Drivers Behind Thailand's Inflation Dynamics), and headline inflation should average 0.8 percent in 2019, and 1.0 percent in 2020, around the lower bound of the BOT's target range.

Figure 5. Inflation



Source: CEIC; Bureau of Trade and Economic Indices

Figure 6. Inflation Expectations for the Next 12 Months



Source: Bank of Thailand

6. **The current monetary policy stance is accommodative, with the reductions in the policy rate in August to 1.5 percent from 1.75 percent and November 2019 to 1.25 percent from 1.5 percent.** Since the August policy rate cut, one-week Bangkok Interbank Offered Rate (BIBOR) rate,³ the three-month T-bill rates, the minimum retail rate,⁴ and the minimum overdraft rate⁵ have also trended downward, while the average savings deposit rate has been flat. Meanwhile, the 10-year government bond yield has been trending down since Q4 2018, similar to the movement of US bond yields (Appendix Figure 1.4). Commercial bank loan growth declined in H1 2019, after trending up in 2018.

² Some supply side factors have also contributed to the lower core inflation in 2019, such as the wearing off of the base effects from increased excise taxes on tobacco and alcoholic beverages.

³ The BIBOR is the average interest rate quoted by commercial banks when lending to each other.

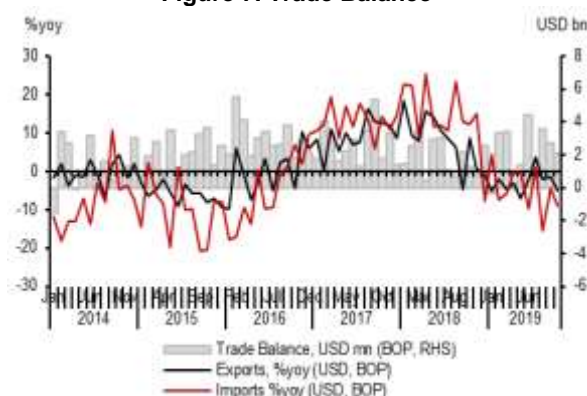
⁴ The minimum retail rate is the interest rate charged by banks to their most creditworthy retail borrowers.

⁵ The minimum overdraft rate is the interest rate charged by banks to their prime large customers for overdraft.

A.3 External Sector

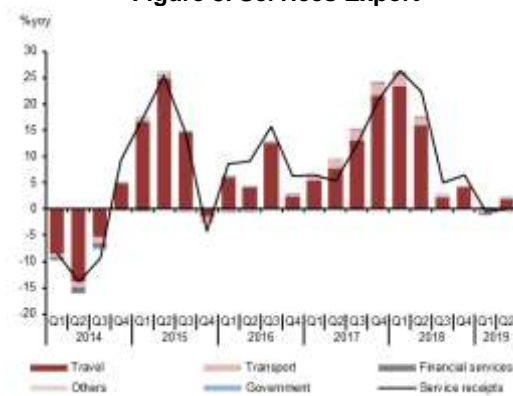
7. **The current account surplus widened in the first nine months of 2019, as imports contracted more than exports (Figure 7).** Goods exports to most major trading partners such as ASEAN, China, and the EU contracted in the first nine months 2019, reflecting the impact of US-China trade conflict and weakening global growth. Exports to the U.S., however, grew 14.1 percent, higher than the 5.1 percent growth in the same period a year ago, which may imply some positive trade diversion effects from the US-China trade conflict. Exports declined in the first nine months of 2019 across most major products such as agriculture, agro-manufacturing products, automotives, electronics, and other manufacturing products (Figure 19). Tourist arrivals slowed to 3.5 percent growth in the first nine months of 2019, down markedly from 8.4 percent growth in the same period last year. In particular, tourist arrivals from China, a major tourism market, slowed from a 13.3 percent increase to a 1.7 percent increase, mainly on account of a major ferry accident in Phuket but also weighed down by the economic slowdown in China and a stronger baht (see Figure 8 and Appendix Figure 1.2). Overall, the current account has remained in surplus, widening to USD26.4 billion in the first nine months of 2019, compared to USD22.2 billion in the same period last year, as imports declined even more sharply than exports. Imports of capital goods, and raw materials and intermediate goods, declined by 4.5 percent and 8.4 percent, respectively, while imports of consumer goods softened to 2.6 percent growth, compared to the 10.6 percent in the same period last year.

Figure 7. Trade Balance



Source: CEIC; Ministry of Commerce

Figure 8. Services Export

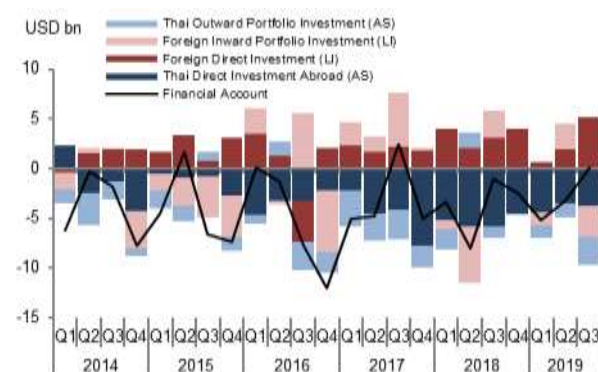


Source: CEIC; Bank of Thailand

8. **The current account surplus has been partially recycled and invested overseas, in the form of foreign direct investment (FDI) by domestic corporates and portfolio investment by residents.** As a result, the financial account balance has continued to be in deficit in H1 2019 (Figure 9). Inward direct investment by non-residents increased in 2018, but moderated in H1 2019. Direct investment overseas by Thai corporates is higher than inward direct investment in 2018 and H1 2019, resulting in net direct investment outflow during the period. In the past several years, Thai corporates' direct investment abroad has been

increasing to take advantage of growing markets, resources, lower wages, and GSP preferences in those countries.⁶ In 2018, portfolio investments by both foreigners and Thai residents registered net outflows, while in H1 2019, the portfolio outflows by Thai residents exceeded the portfolio inflows by foreigners. Thus, there were net portfolio outflows during 2018 and H1 2019 (Figure 9).

Figure 9. Financial Account



Source: CEIC; Bank of Thailand

Figure 10. Regional Exchange Rates



Source: CEIC; National authorities

9. **Overall, the external position remains strong, underpinned by the sizable current account surplus and substantial international reserves.** The current account has remained in surplus at 6.6 percent in the first three quarters of 2019, foreign reserves continue to be high, to cover 3.7 times of short-term external debt and 9.5 months of import payments for goods and services as of September 2019.⁷ In addition, gross external debt remains low at 34.8 percent of GDP as of Q2 2019, and short-term debt at 35.6 percent of the total debt as of Q3 2019.

10. **Reflecting its strong external position, the Thai baht has appreciated by over 6.0 percent against the US dollar since the beginning of 2019, and even more against most regional currencies, with the baht attracting inflows during episodes of risk aversion against emerging markets.** Since the start of 2017 until November 22, 2019, the Thai baht has appreciated against the US dollar by around 15.7 percent, compared with the Japanese yen's 7.5 percent, the ringgit's 7.2 percent, the Singapore dollar's 5.8 percent, and the Korean won's 2.0 percent, while most other regional currencies such as the rupiah, the peso, and the dong have depreciated (Figure 10). Overall, the real effect exchange rate index increased by 13.6 percent between January 2017 and September 2019 (Appendix Figure 1.2). In response, the BOT relaxed regulations FX regulations to help ease the appreciation pressure on the baht.⁸

⁶ See Appendix Figure 1.2 and Box A2: Development of Thailand's ODI after the Global Financial Crisis, in *Annex 2*.

⁷ Structurally, the current account surplus also partly reflects the low investment rate.

⁸ These include relaxation of rules on repatriation of export proceeds, rules on residents' investment in foreign securities, rules on outward transfer of funds by individuals and corporations, and the settlement of gold trading in foreign currency.

A.4 Financial Sector

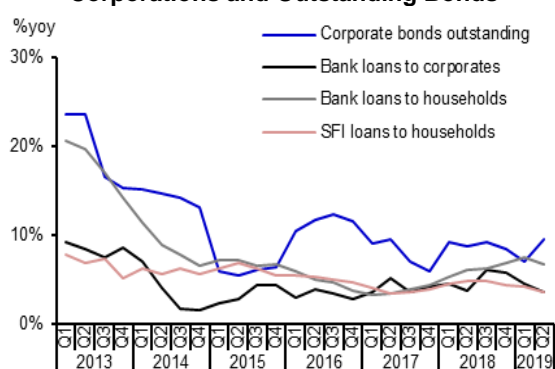
11. Total loan growth increased in 2018 but moderated in H1 2019 (Figure 11).

Consistent with the economic slowdown, total commercial loan growth stood at 4.2 percent in Q2 2019, lower than the 5.6 percent in Q1 2019 and 6.0 percent in 2018. Bank loans to corporates grew by 1.7 percent in Q2 2019, lower than the 3.4 percent in Q1 2019, as loans to large corporates softened, while growth in loans taken out by small and medium enterprises (SMEs) declined (Table 1). Meanwhile, consumer loans also moderated to 9.2 percent in Q2 2019 from 10.1 percent in Q1 2019, as growth in both housing and auto loans moderated, as tighter LTV rules were implemented and domestic car sales slowed down. Outstanding bonds issued domestically by corporates grew 13.2 percent in Q2 2019 while outstanding bonds issued by state-owned enterprises (SOEs) continued to decline. Overall, private sector leverage as a percentage of GDP has been broadly stable since 2017, after a short decline around 2015 to 2017 (Figure 12). Part of the private sector leverage includes household loans which declined from 81.2 percent of GDP in Q4 2015 to 77.7 percent in Q2 2018, then inched up to 78.7 percent in Q1 2019.

Table 1. Commercial Bank Lending Growth (%)

Bank Loans	2018	Q1 2019	Q2 2019
Total loan	6.0	5.6	4.2
Corporate loans	4.4	3.4	1.7
Large corporates	4.1	4.4	2.6
SMEs	4.5	1.5	-0.1
Consumer loans	9.4	10.1	9.2

Figure 11. Loans Extended by Other Depository Corporations and Outstanding Bonds



Note: Loans include loans from other depository institutions and other financial corporations
Source: Bank of Thailand; AMRO staff calculations

Figure 12. Private Sector Leverage



Source: Bank of Thailand; Thai Bond Market Association; Securities and Exchange Commission

12. Financial institutions remain sound overall, with strong capital buffers and high loan-loss reserves. Overall, the banking system's non-performing loan (NPL) ratio has been broadly stable recently at 3.0 percent as at Q3 2019. However, the NPL ratio of SME loans

remains high and on an upward trend, reaching 4.8 percent in Q3 2019, but declined slightly in Q2 due to debt write-offs and restructuring. The NPL ratio of state-owned specialized financial institutions (SFIs) has been on an upward trend since Q1 2018, reaching 4.5 percent in Q2 2019. That said, a strong capital buffer and high loan-loss reserves should help commercial banks and SFIs mitigate credit risks. Commercial banks' liquidity coverage ratio stood at around 190 percent on an aggregate basis as at Q3 2019, significantly higher than the minimum requirement of 100 percent. Recent regulatory reforms, including the introduction of systemically important domestic banks' regulations,⁹ the revision of regulations on credit cards and household loans,¹⁰ revised mortgage loan regulations,¹¹ the introduction of net-stable-funding ratio, and the enactment of the Cooperatives Act, should help strengthen financial stability. In addition, further measures such as regulations relating to debt-to-service ratio are ongoing.

13. **The Bills of Exchange (B/E) defaults in late 2016 and the first half of 2017 have resulted in a greater proportion of higher-rated bond issuances and a smaller proportion of non-rated bond issuances.** In late 2016 and the first half of 2017, some issuers defaulted on their non-rated B/Es. These B/Es represented only about 0.2 percent of total corporate bonds outstanding and did not result in systemic defaults in other B/Es. In the wake of the B/E defaults, the percentage of non-rated and lower-rated bonds issued fell and the percentage of higher-rated bond issuances increased, in large part due to investors' increased awareness of the risks associated with lower or non-rated bonds. Thus, the share of non-rated bonds fell from 6.1 percent in 2016 to 3.3 percent in 2018 and 4.4 percent in the first nine months of 2019, while the share of bonds rated AA or higher increased from 24.3 percent in 2016 to 33.8 percent in 2018 and 33.7 percent in the first nine months of 2019 (Figure 13).

Figure 13. Corporate Bond Issuances

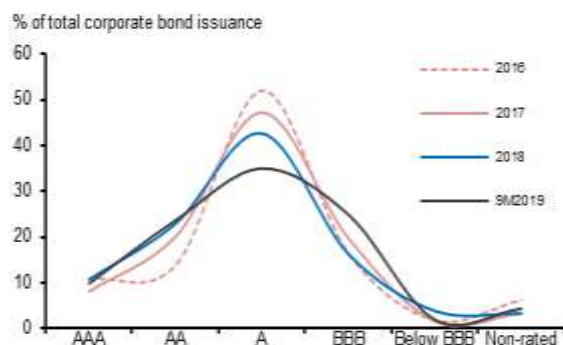
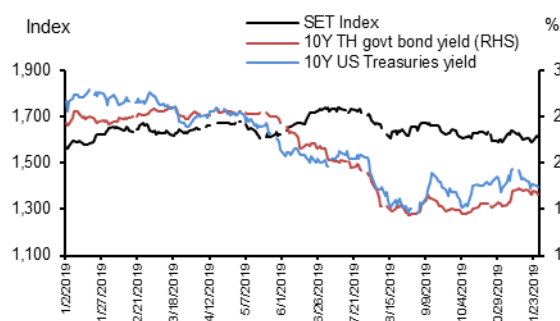


Figure 14. The Stock Exchange Index and Bond Yields



⁹ Requiring the largest commercial banks, which are deemed to be "too-big-to-fail", to maintain an additional capital.

¹⁰ Reducing the credit line limits for credit card and personal loans.

¹¹ Requiring a stricter loan-to-value (LTV) ratio of 70 percent for third and subsequent mortgages and 80 to 90 percent for second mortgages.

Source: CEIC; Thai Bond Market Association

Source: CEIC; Stock Exchange of Thailand; Thai Bond Market Association

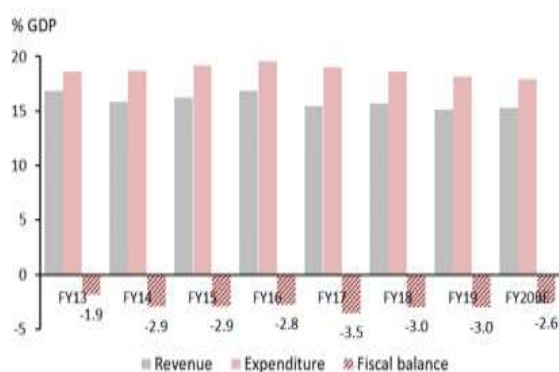
14. **Thai financial markets – along with those in other emerging market economies – have seen some increase in volatility (Appendix Figure 1.4), triggered by uncertainty arising from trade conflicts among major economies.** The Thai stock exchange index has been moderate while 10-year government bond yields have been trending downward since May 2019 (Figure 14).

15. **The BOT has adopted measures to limit speculation on the baht and increase surveillance on non-resident debt holdings.** The limit for Non-resident Baht Accounts' outstanding balance has been reduced to THB 200 million per non-resident from THB 300 million. Non-residents with underlying trade or investment may apply for an exemption. The BOT has also tightened the reporting requirements for non-residents holding debt securities, to increase monitoring on non-residents' investment patterns.

A.5 Fiscal Sector

16. **While fiscal policy remains supportive of economic growth, the fiscal deficit is budgeted to narrow from 3.0 percent of GDP in FY2018¹² to 2.6 percent in FY2020.** The budget deficit was maintained at 3.0 percent in FY2019, as both expenditure and revenue declined by 0.5 percentage point (Figure 15). For FY2020, the fiscal deficit is budgeted to be lower at 2.6 percent.

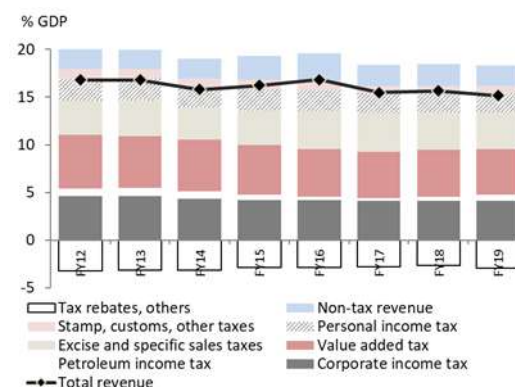
Figure 15. Government Fiscal Position



Note: FY20BE are budget numbers

Source: CEIC; Fiscal Policy Office; Bureau of Budget

Figure 16. Fiscal Revenue



Source: CEIC; Fiscal Policy Office

17. **As a share of GDP, revenue has been declining since FY2016 due to changes in tax policy and low tax buoyancy.** Overall, the net tax revenue-to-GDP ratio has fallen from 14.7 percent in FY2012 to 13.2 percent in FY2019 (see Figure 16), reflecting low tax revenue buoyancy. Part of the fall in tax revenue can be explained by changes in tax policy, such as

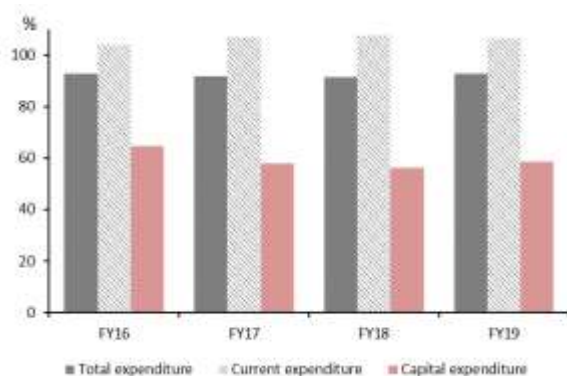
¹² Thailand's fiscal year is from 1 October to 30 September.

the reduction in corporate income tax rate,¹³ corporate income tax exemptions for SMEs registered in the Single Account Project,¹⁴ cuts in personal income tax rates and increases in personal income tax deduction¹⁵ and cuts in custom duties for intermediate goods.¹⁶ However, value-added tax (VAT) collection has also fallen from 5.6 percent of GDP in FY2012 to 4.9 percent in FY2018, suggesting that VAT tax elasticity may also be less than one, as consumers have been purchasing more goods online.

18. **Government expenditure as a percentage of GDP has fallen from 19.0 percent in FY2017 to 18.2 percent in FY2019.** For FY2020, government expenditure is budgeted to slightly decline further by an additional 0.3 ppt to 17.9 percent of GDP. The overall fiscal deficit has fallen from 3.5 percent of GDP in FY2017 to 3.0 percent in FY2019, and is budgeted to fall further to 2.6 percent in FY2020.

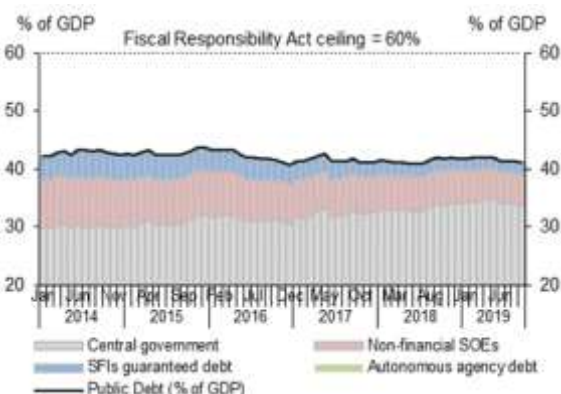
19. **Disbursement rates by the government and SOEs have remained low in FY2018 and FY2019, particularly for capital expenditure (Figure 17).** As for the central government, the disbursement rate for total expenditure exceeded 90 percent, but the disbursement rate for capital expenditure was below 60 percent in FY2019. The disbursement rate for SOEs' capital expenditure, particularly transport SOEs, has traditionally been low, but is even lower in FY2019. Notwithstanding the substantial increase in transport SOEs' investment budget in FY2019, the disbursement rate for capital expenditures have been lower in FY2019 compared to FY2018 (Appendix Figure 1.3). Moreover, going forward, the delay in the passing of the FY2020 budget¹⁷ does not bode well for a ramp-up in government spending.

Figure 17. Budget Disbursement Rate



Source: Fiscal Policy Office; Bureau of Budget; AMRO staff calculations

Figure 18. Public Debt



Source: CEIC; Public Debt Management Office

¹³ The avowed purpose is to increase investor confidence.

¹⁴ The stated purpose is to incentivize SMEs to register so as to bring them into the formal tax system.

¹⁵ According to the government, the purpose is to increase equity, the reduce tax burden, boost consumers' purchasing power, and broaden the tax base. It is hoped that the tax decrease will incentivize middle-income earners to spend more, while dissuading high-income taxpayers from evading taxes. In addition, it is hoped that taxpayers with families to have more children.

¹⁶ The apparent purpose is to enhance Thailand's competitiveness, so that Thai products will not lose out to competitors from countries with lower import duties, such as those from countries with free trade agreements.

¹⁷ The Bureau of Budget estimates that the FY2020 budget may be passed around January 2020, compared with the previous year's (FY2019) budget, which was passed in August 2018.

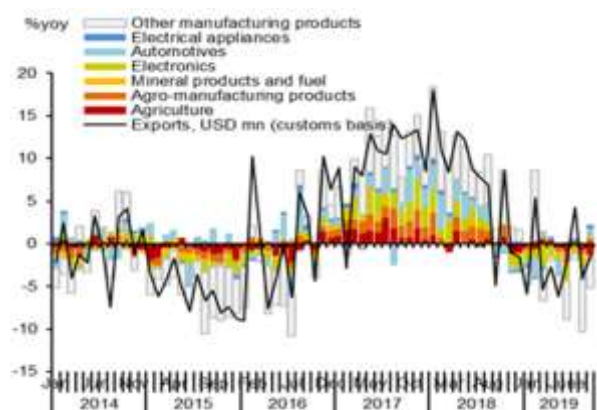
20. **Thailand has significant fiscal space, as public debt is only slightly above 40 percent of GDP.** The Fiscal Responsibility Act was promulgated in April 2018 and will help ensure fiscal discipline and medium-term fiscal sustainability. The level of public debt as at end-September 2019 stood at 41.1 percent of GDP, still well below the 60 percent ceiling under the fiscal rules set by Thailand's Fiscal Policy Committee in accordance with Section 50 of the Act (Figure 18). In addition, external public debt makes up less than 4 percent of total public debt, also well below the 10 percent ceiling specified in the fiscal rules.

B. Risks, Vulnerabilities and Challenges

B.1 Risks to Macroeconomic Outlook

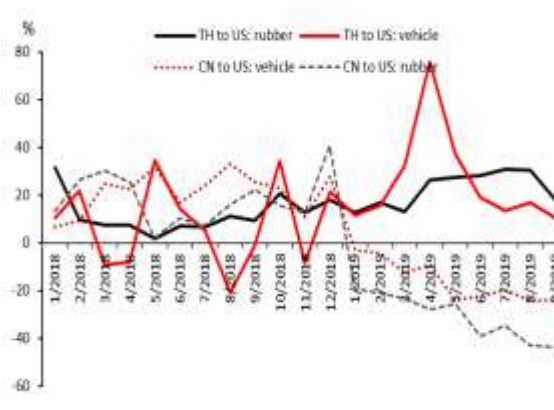
21. **Downside risks to growth continue to stem mainly from a further escalation of trade conflict between the U.S. and China.** The tariffs imposed by the U.S. and China on each other has brought about mixed results on Thailand. As anticipated in last year's AMRO Annual Consultation Report on Thailand (2018), the impact on Thailand has been through the trade destruction effects that adversely affected Thai industries supplying intermediate goods to China or the U.S. Lower global growth resulting from the trade conflict has also led to an overall reduction in imports from China and other countries. These negative trade destruction effects, combined with the downturn in the electronics cycle, have resulted in a significant contraction in Thai exports (Figure 19). Moving forward, the main downside risk to growth remains the further escalation of trade conflict between U.S. and China, and the uncertainty over the outcome of the negotiation process. While the U.S. has delayed the implementation of new 10 percent tariffs on some imported goods from China, such as mobile phones and toys until December 15, a lack of agreement between the two countries can further deepen and prolong the effects of the trade conflict and the associated uncertainty.

Figure 19. Recent Export Performance



Source: Customs Department (compiled by the Bank of Thailand)

Figure 20. Exports to US and China



Source: CEIC; Ministry of Commerce; US Census Bureau

22. As anticipated in last year's Report, there are early signs of positive trade diversion and investment diversion effects to Thailand as a result of the U.S.-China trade conflict. Some Thai industries have started to benefit from increased U.S. imports of substitute products from Thailand of tariffed goods (trade diversion), and some U.S., Chinese, and other firms are starting to relocate their production to Thailand as a way to get around the additional tariffs on domestic exports (investment diversion). While Thai exports to China have been experiencing significant declines, Thai exports to the U.S. have shown moderate increases overall. And while China's exports to the U.S. have plunged, particularly for tariffed goods, Thailand's exports to the U.S. for some tariffed products such as rubber and rubber products, vehicles, and miscellaneous articles of base metals have surged (Figure 20). There have also been reports of companies relocating to, or intending to relocate to, Thailand as a result of the trade conflict, such as Ricoh, Sharp, Kyocera, Holley Group, and Zhongce Rubber Group. Overall, however, the negative spillover effects of the trade conflict have hitherto outweighed the positive trade and investment diversion effects, although the latter effects are expected to become more pronounced over time. In line with this expectation, the recently approved "Thailand Plus" additional incentives for firms relocating to Thailand should help speed up the realization of the positive investment and trade diversion effects.

23. Aside from risks on the external front, domestic factors including the delay in passing the FY2020 budget,¹⁸ can weigh on growth. There is some risk that the FY2020 budget delay and thin coalition majority may weigh on the fast-tracking of planned mega-infrastructure projects. The government's Eastern Economic Corridor (EEC) and mega-infrastructure plans are commendable and, if implemented in a timely manner, can help boost public investment and investor confidence (see Box: Thailand's Eastern Economic Corridor and its Prospects). The mild El Nino in H1 and the Q3 storm Podul flooding in Northeast and other provinces may have a prolonged impact on the agricultural production and incomes of rural households.

B.2 Financial Sector Risks

24. Risks to financial stability remain contained, although there exist some pockets of risk. The moderation in loan growth (Figure 11) and the decrease in the minimum retail rate, together with largely flat savings rate (Appendix Figure 1.4), may put pressure on banks' profitability, which is relatively low among peer emerging market economies (Figure 21).¹⁹

¹⁸ The delay in passing the FY2020 budget may limit the government's ability to actively use fiscal policy to support the economy, although such may be alleviated by the new procurement law that allows utilization of the previous year's budget ceiling.

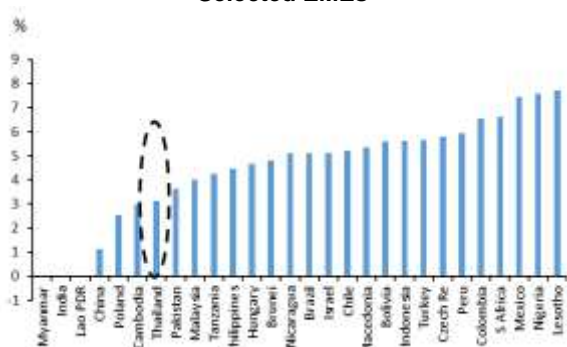
¹⁹ There could be several reasons behind Thai banks' comparatively low profitability, among them the low economic growth, corporates' preference for bond issuance (see Figure 11), and legacy effects of the Asian Financial Crisis (AFC), as banks have become more conservative since the AFC, and also have to contribute to the Financial Institutions Development Fund.

While the consumer NPL ratio has been broadly stable since 2017, the mortgage NPL ratio has been increasing from 2.34 percent in Q1 2013 to 3.49 percent in Q3 2019 (Table 2). The issuance of the revised mortgage loan regulations requiring stricter loan to value (LTV) ratios has resulted in a reduction in the number of second and subsequent mortgages, and should help keep housing NPLs in check, going forward. On the demand side, the revised LTV regulation may contribute in part to the recent decline in real estate purchases, but the impact has been seen mostly in the segments with high speculative demand. On the supply side, however, the revised LTV regulation has prompted developers to delay new launches, which helps to ease oversupply conditions to some extent. The debt servicing capacity of the SMEs may deteriorate amid the economic slowdown, which may lead to a further increase in the NPL ratio of the SME segment (see Figure 22). In addition, the NPL ratio of SFIs has been on an increasing trend since Q1 2018, after declining from Q4 2016 to Q2 2017, while its proportion of special mention loans has been on an increasing trend from 2010 (Figure 22). Overall, although credit risk in the banking system warrants close monitoring, commercial banks remain sound, with a strong capital buffer and loan-loss reserves.

Table 2. Selected NPL Ratios

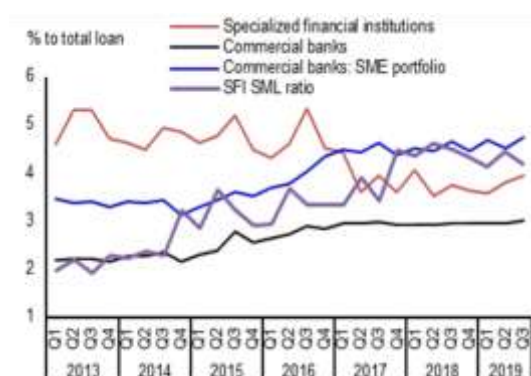
NPL items	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019
Banks	2.93	2.94	2.94	2.94	2.95	3.01
Consumer loans	2.72	2.73	2.67	2.75	2.74	2.81
Housing loans	3.39	3.37	3.25	3.35	3.34	3.49
Specialized Financial Institutions	4.2	4.4	4.0	4.3	4.5	

Figure 21. Banks' Return on Assets:
Selected EMEs



Note: Latest data is as of February 2019
Source: AMRO Artemis

Figure 22. Non-performing Loans (NPL)

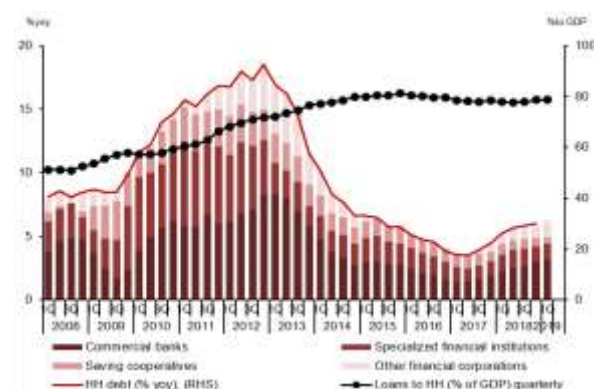


Source: CEIC; Bank of Thailand; Fiscal Policy Office

25. **The household debt to GDP ratio, which is high compared with regional peers, has increased somewhat recently.** Thailand's household debt to GDP ratio remains high relative to other economies in the region, and the highest among economies with comparable per capita GDP, and needs continued monitoring. The household debt to GDP ratio started to slightly pick up again from 2018 to 78.7 percent in Q2 2019 (Figure 23). Among the household

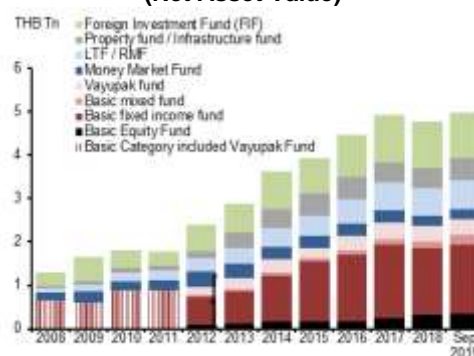
groups, the low-income households are more vulnerable, given that they are more highly leveraged and their incomes may be affected by the drought and the weak economy. On a positive note, the recently revised LTV regulations have reduced speculative demand, and may curb household borrowing. However, given the economic slowdown, bank and non-bank financial institutions might compete over the remaining demand in the retail market especially in automotive market, which could lead to excessive borrowing.

Figure 23. Household Debt



Source: Bank of Thailand

Figure 24. Structure of Mutual Fund Market (Net Asset Value)



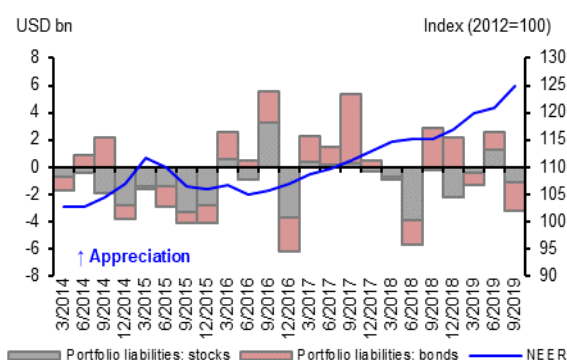
Source: CEIC; Association of Investment Management Companies

26. **The search-for-yield behavior under a prolonged period of low interest rate environment requires continued vigilance.** Household savings in credit cooperatives and credit unions, together with investment in fixed income funds and foreign investment funds (see Figure 24), have expanded faster than household deposits at commercial banks and SFIs in the past five years. The interrelatedness of deposits and borrowings among savings cooperatives calls for continued monitoring. In addition, large conglomerates have been raising funds actively during the period of low interest rates, and some of them have channeled more investment to non-core businesses and abroad. There is thus a need to continue close monitoring of the search-for-yield behavior in these areas, and ensure that it does not lead to the underpricing of risks. In particular, a continued search-for-higher-yield behavior of savings cooperatives, whose assets and deposits have grown at a higher rate, has led to a need to ensure that they adopt best practices and do not pose risks to the financial system. There is thus a need to issue the regulations implementing the Cooperatives Act, and continue enhancing the regulatory and supervisory infrastructure of savings cooperatives. Meanwhile, on a positive note, several regulations have been recently issued that should help enhance financial stability, including bank regulations on the net stable funding ratio and a recovery plan in case of distress, as well as the revised regulations on the sale of newly issued debt securities and the supervision of mutual fund businesses.

B.3 Capital Flows and Exchange Rate Volatility Risks

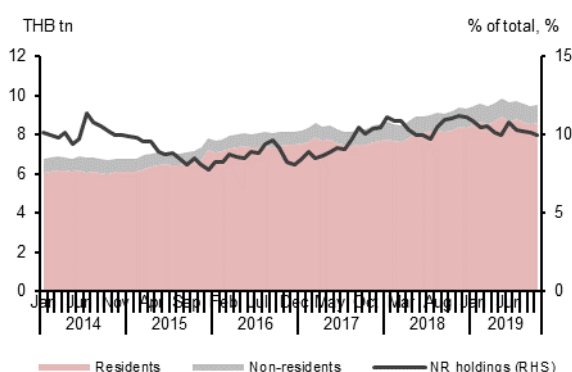
27. Overall, capital flow volatility (see Figure 25) amid global uncertainty would warrant continued vigilance. However, non-resident bond outflows should not be a cause for concern as foreigners hold only about 10 percent of government securities (Figure 26). Moreover, Thailand's substantial international reserves provide a strong cushion against the adverse impact of outflows.

Figure 25. Non-resident Flows in Stock and Bond Markets



Source: CEIC; Bank of Thailand

Figure 26. Foreign Holdings of Debt Securities



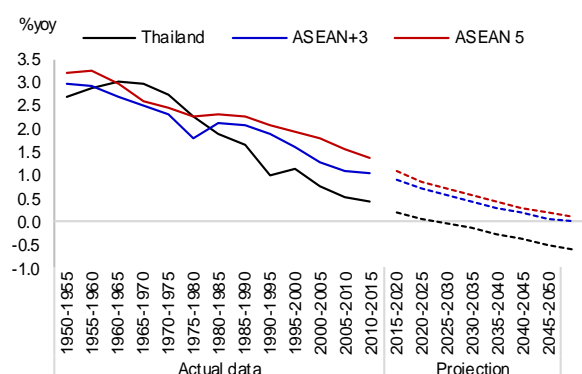
Source: CEIC; Bank of Thailand

28. The Thai baht has appreciated significantly against regional peers (Figure 10 and Figure 25), which could pose a downside risk to exports and tourism. The baht's strength is largely supported by the large current account surpluses, part of which have been reinvested overseas through outward direct investment by corporates and portfolio outflows by residents. Unlike other emerging markets, Thailand has been increasingly seen as a safe haven for investors, and attracts inflows during bouts of risk aversion. During these periods, the baht comes under upward pressure, notwithstanding the low interest rate.

B.4 Structural Challenges

29. With a very low fertility rate, Thailand is aging at a relatively fast pace (Figure 27) and is at risk of “getting old before getting rich”. Labor force participation has started declining, at the latest, since 2014 (Figure 28), with a consequent reduction in the contribution of labor to Thailand's potential growth, which has been partially offset by the influx of migrant workers from neighboring countries. Population aging may also put pressures on the fiscal position, as pension and health-related spending would rise over the longer term (see Box A: Demographic Changes and Their Implications on the Thai Economy).

Figure 27. Population Growth



Source: CEIC; United Nations

Figure 28. Labor Force Participation Rate

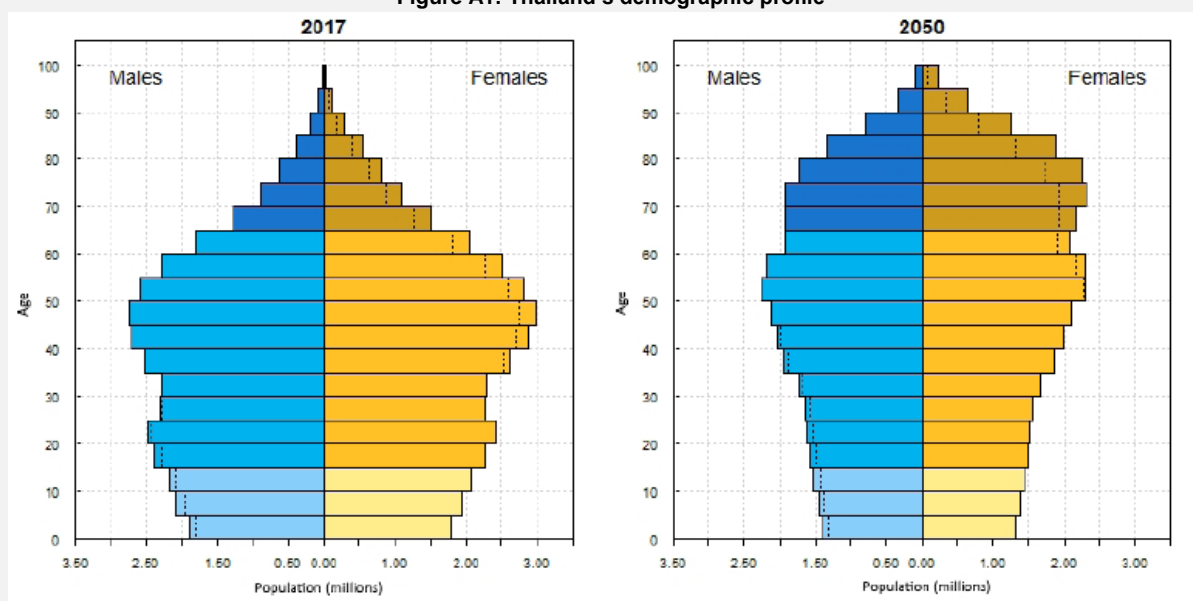


Source: CEIC; Bank of Thailand

Box A. Demographic Changes and Their Implications on the Thai Economy²⁰

This box aims to provide a brief overview of the ramifications of Thailand's changing demographics on the country's labor supply, growth potential, welfare of the elderly, and fiscal burden. As one of the regional economies that are rapidly aging, Thailand's population is projected to peak within the next ten years and will likely act as a constraint on the country's growth potential. Impact will also be felt on the fiscal front, with government expenditure on healthcare and pension rising along with the share of the elderly population in the total population. In addition to macroeconomic considerations, welfare of the elderly will become an increasingly pressing concern for Thai society over the next few decades.

Figure A1: Thailand's demographic profile



Source: United Nations Department of Economic and Social Affairs

Thailand's population is expected to peak around 2028, with the labor force projected to peak even sooner. Among ASEAN countries, it has the lowest population growth rate, at 0.3 percent annually and the second lowest total fertility rate (1.6 children per woman). Low population growth over the past few decades, along with advances in medical care, has resulted in a fast-aging society, with older persons (over 60 years) accounting for about 16 percent of the Thai population in 2017 and projected to constitute over 35 percent of the population by 2050 (Figure A1). The Thai population is expected to peak around 2028 at around less

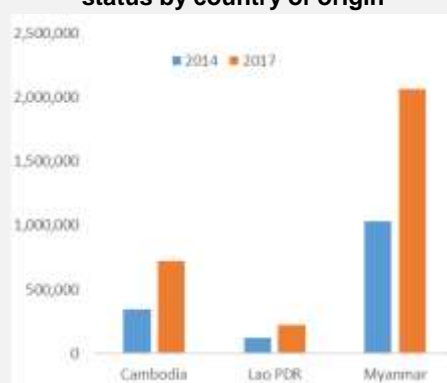
²⁰ This box is prepared by Jade Vichyanond (Economist).

than 71 million persons, followed by a subsequent decline. However, the labor force will likely to start contracting sooner, given that the population in the age of 15-64 is estimated to peak as early in 2020 at around 49 million persons.²¹

While the sluggish expansion of the population and its top-heavy composition point to overstretched resources, the influx of migrant workers from neighboring countries has alleviated such supply-side constraints in the short run. As of 2018, the number of non-Thai workers was estimated at around 4.9 million. Of those, approximately 3.9 million were migrant workers from Cambodia, Laos, and Myanmar, up from 2.7 million in 2014 (Figure A2).²² While it is difficult to forecast the number of immigrant workers, recent trends point towards continuing increase over the medium to long term, barring significant changes in Thailand's immigration policies. The presence of these workers, often employed in construction, agriculture, manufacturing, domestic work, fishing, seafood processing, and services, could be one of the factors behind Thailand's relatively low costs of labor and production given its middle income level, helping Thailand to maintain a higher growth rate.

Over the long term, growth potential could decline in tandem with the shrinking working-age population. The shrinking pool of young Thai workers and the fact that most migrant workers are low-skill wage earners, could curb the economy's dynamism and growth potential, given that innovation is for the most part undertaken by the young and educated. In addition, the low labor and production costs engendered by migrant workers, could sap firms' incentive to invest in productivity enhancing technology, dampening the outlook for innovation and creation of high-value-added products and services within the Thai private sector.

Figure A2: Migrant workers with legal status by country of origin



Source: Department of Employment, Ministry of Labour

At present, the government's spending on social protection (healthcare and pensions) is relatively small.²³ Fiscal expenditure on healthcare is modest, in part due to limited per-patient spending of the universal health coverage program, which constitutes the lion's share of the government's healthcare expenditure. Similarly, the government's expenditure on pensions is not substantial, as Thailand's public pension system is largely targeted at the formal sector (both public and private), which accounts for only about a third of the workforce (Figure A3). While the informal sector is eligible for pension benefits, they are widely deemed inadequate to provide for comfortable living standards, notwithstanding some support provided by the National Savings Fund.²⁴

Challenges with aging in Thailand lie more on the welfare of the older generation considering the thin social safety net. Increasing longevity and lack of sufficient pensions are pressuring the elderly to postpone retirement and work longer to ensure income security in old age. While workers in the informal

²¹ UN World Population Prospects (2019 Revision).

²² Out of 3.9 million, about 3.1 million hold legal status, according to the United Nations Thematic Working Group on Migration in Thailand 2019.

²³ Rapeesupa Wangcharoenrungs, FPRI (2015).

²⁴ The main pension program for those previously employed in the informal sector is the Old Age Allowance (OAA), according to which 600 baht is paid to those at the age of 60-69 and the payment increases by 100 baht for every ten-year bracket thereafter.

sector can work as long as they wish, those in the formal sector are forced to retire at 60, the official retirement age, before they are ready financially to support themselves.^{25, 26} Besides retirement age, skill irrelevance is yet another reason for companies to retire their older workers. It is estimated that the ratio of working-age population to elderly population (>65 years of age) will be around 4.5 in 2020 and decline to 2.0 by 2040.²⁷

Figure A3: Thailand Public Pension Schemes



Source: Worawet Suwanrada, Chulalongkorn University

A number of policies have been put in place to address challenges arising from population aging. In May this year, the government approved a plan to extend the retirement age for civil servants beyond 60 (although the new retirement age has not been set). To enhance employability, the Ministry of Labour provides training for retirees wishing to re-enter the job market.

Further policy efforts are necessary to alleviate impacts from population on the economy and to ensure welfare of the older generation. First, formal sector pension schemes have relatively low contribution rates, which lead to pension benefits that may be insufficient for retirees' financial needs; an increase in contribution rates would be a welcome step towards greater income security. Meanwhile, payouts provided by pension schemes in the informal sector, in particular the Old Age Allowance (OAA), may not be sufficient, which makes the revision of the schemes an urgent priority. Similar adjustments should also be made to the government's healthcare program as the country ages. Second, to enhance the country's growth potential, more resources can be directed towards R&D and training, which should encompass not only the school-age and working-age population but also older population. Third, extending the retirement age for private sector employees will keep older workers in the workforce longer, while reducing potential fiscal burdens on pension. Expansion of training programs for retirees will be beneficial in equipping them with skills necessary for securing and maintaining employment.

30. **In addition, the shortage of skilled labor poses a challenge to growth, particularly as the country pursues the Thailand 4.0 initiative and endeavors to become a high-income country by 2026.** Thailand's 20-year national development strategy envisions it as a high-income country by 2026, which requires the economy to expand at an average 5.0 percent a year.²⁸ However, on top of the shrinking labor force, Thai firms also face difficulty in hiring skilled labor, in particular engineers in both IT and non-IT fields, scientists, researchers, managers and salespersons with technical skills. This shortage will be a medium- to long-term

²⁵ This has been in place for quite some time in the public sector but was only instituted for the private sector in 2017.

²⁶ That said, the number of workers aged at least 60 has risen from around 3 to 5 million from 2013 to 2019, according to the NSO's Labor Force Survey.

²⁷ Rapeesupa Wangcharoenrungs, FPRI (2015).

²⁸ As estimated by the Office of National Economic and Social Development Council.

challenge and warrants improvement in the quality of Thai education, especially in science and technology.

C. Policy Discussions

31. **Given the challenging global economic environment and easing global monetary conditions, Thailand should adopt expansionary fiscal and monetary policies to support the weak economy, while employing macroprudential measures to address the pockets of risks in the financial sector.** Thailand's external position is strong, and there is substantial policy space to shore up the economy in terms of fiscal and monetary policies. Structural policies to develop the EEC, build mega-infrastructure projects, and move Thailand up the production value chain towards high technology 4.0 industries, should be front-loaded and ramped up, and the large fiscal space should be used to support those initiatives.

C.1 Fiscal Role in Boosting Recovery and Restoring Private Investment

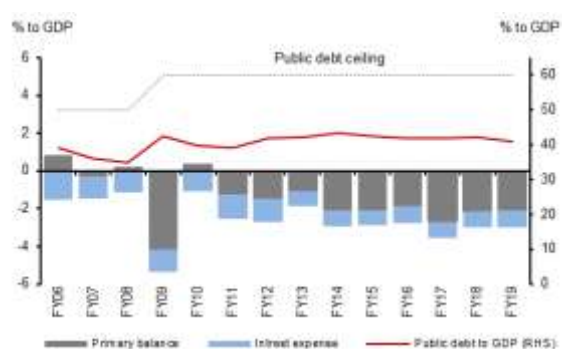
32. **Fiscal policy can be more expansionary, and should prioritize infrastructure investment and facilitate structural reforms in order to lift the growth potential and enhance the social security system to prepare for the future amid the aging of the population.** The authorities should exert efforts to pass the FY2020 budget in a timely manner, to avoid delays in the implementation of mega-infrastructure projects. Overall, fiscal space remains significant with public debt at a moderate 41.1 percent of GDP, well below the 60.0 percent legal ceiling (Figure 29). Given that the economy is operating below potential (Figure 30), fiscal spending should be countercyclical and front-loaded, while at the same time prioritizing infrastructure investment and facilitating structural reforms in order to enhance the growth potential. In particular, AMRO supports the recently announced stimulus package to provide assistance to SMEs, farmers and low-income households.

33. **There is room for further fiscal expansion going forward.** The THB 316 billion stimulus package unveiled in August 2019 is a step in the right direction. However, growth has slowed noticeably and risks are tilted to the downside. Moreover, since the announcement of the stimulus package in August, additional tariffs have been imposed by the U.S. and China, the U.S. has decided to remove USD 1.3 billion of Thailand's GSP trade preferences,²⁹ while tropical storm Podul has caused widespread flooding in the Northeastern and other provinces. Should the external headwinds further intensify, there is room for further fiscal expansion going forward.

²⁹ To take effect on 25 April 2020. The Thai products covered under the U.S. measure are listed in https://ustr.gov/sites/default/files/files/gsp/Products_to_be_removed_from_GSP_eligibility_for_Thailand.pdf.

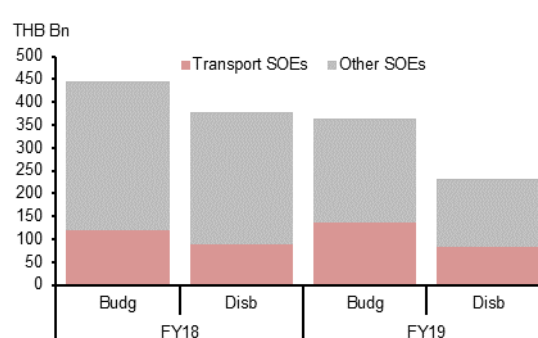
34. **The large EEC and other infrastructure projects should be carried out in a timely manner and the authorities should guard against execution risks and implementation delays.** The implementation of the mega-projects has lagged behind schedule and the disbursement rates for capital expenditures by the implementing agencies and SOEs have been low so far (Figures 17 and 30). Overall, Thailand needs to significantly strengthen the institutional capacity to plan, program and implement mega-infrastructure projects of the scale envisioned by the EEC and transportation plans. In particular, project implementation may get a boost if Thailand takes advantage of the expertise of development partners in financing and programming of public investment projects.

Figure 29. Fiscal Deficit



Source: CEIC; Fiscal Policy Office; Public Debt Management Office; Office of the National Economic and Social Development Council

Figure 30. SOE Budget and Disbursement



Source: State Enterprise Policy Office; AMRO staff calculations

35. **The buoyancy of the tax system can be further enhanced in the medium to long term.** Fiscal revenue to GDP has been on a declining trend since FY2016 (Figure 16), and is among the lowest in ASEAN+3. To support the EEC and other mega-infrastructure plans, and to prepare for pension and health-related costs as a result of the aging population, the revenue to GDP ratio should be increased by broadening the tax base and enhancing tax administration.³⁰

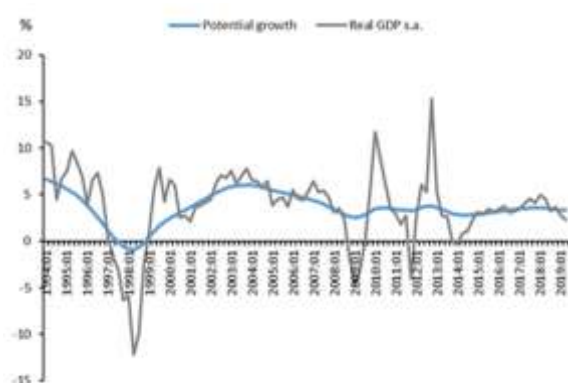
C.2 Calibrating Monetary Policy to Support Growth and Maintain Inflation Target While Preserving Financial Stability

36. **The current monetary policy stance is appropriate in supporting growth amid low inflation and a strong external position.** The current monetary policy stance is accommodative, following the reductions of the policy rate by in August and November 2019 (Figure 32). The low inflation and weak growth prospects amid weaker global economic conditions warrant continued vigilance and proactive policy response if needed. While maintaining financial stability in a prolonged period of low interest rate environment is

³⁰ AMRO staff welcomes enactment of the new Land and Building Tax Act (2019), as well as the authorities plan to move towards e-revenue and utilize big data analytics, among others. In addition, over the medium-term, there is room to increase the VAT rate, which was reduced "temporarily" from 10 percent to 7 percent until September 30, 2020.

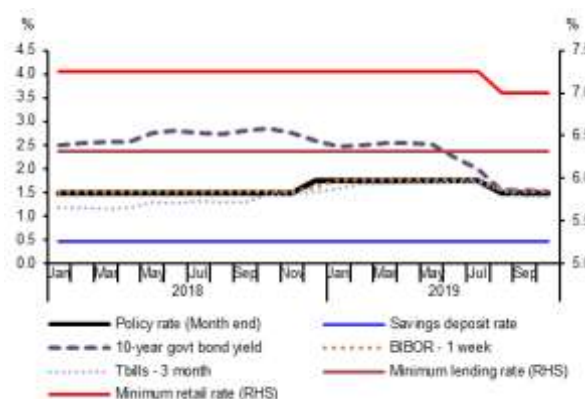
challenging and requires a set of well-coordinated monetary and prudential policies, the authorities have taken significant measures to strengthen financial stability. Although some pockets of financial stability risk remain, many of these can be addressed by implementing the new measures, such as the issuance of ministerial regulations for the implementation of the Cooperatives Act, and the further strengthening of the supervision of savings cooperatives. The search-for-yield behavior associated with the low interest rate environment would also require continued monitoring, and should be supported by a financial literacy campaign, to ensure that retail investors are well-informed and do not take excessive risks. Against this background, monetary policy can focus more on supporting growth, which has fallen below potential (Figure 31), and the rise of headline inflation toward the target.

Figure 31. Potential Growth



Note: Potential output was calculated as a simple average of: (a) HP filter, and (b) Kalman filter estimating an unobserved components model with fixed autoregressive parameters. To handle the endpoint problem, real GDP data was extended to Q4 2020 by applying ARIMA patterns to AMRO growth forecasts. The estimation was done using WinRATS Pro 10.
 Source: AMRO staff calculations

Figure 32. Interest Rates



Source: CEIC; Bank of Thailand

37. Household debt remains high and has increased again recently, and hence requires continued vigilance. Thailand's household debt to GDP ratio is among the highest in the region alongside Korea and Malaysia, and is the highest among economies with comparable per capita GDP. The elevated level of household debt is a vulnerability and a potential source of distress to low-income indebted households when the financial conditions tighten. On a positive note, the revised mortgage loan regulations requiring a stricter LTV ratio of 70 percent for third and subsequent mortgages, and 80 to 90 percent for second mortgages, should help check the build-up of household debt. Going forward, the implementation of new macroprudential tools such as debt to service ratios should help strengthen financial stability further. The impact of the challenging economic environment on SME loan quality requires vigilance.

38. A strong external position provides Thailand with ample buffer against external shocks and greater room for easing monetary policy. Going forward, exchange rate

flexibility should help cushion external shocks, while foreign exchange intervention and capital flow management measures should be used judiciously to avoid disorderly foreign exchange market conditions.

39. Regulatory reforms relating to savings cooperatives and household debt are commendable. The enactment of the Savings Cooperative Act is a welcome development, as are the efforts by the authorities to draft the ministerial regulations for its implementation. Also, the tightened regulations on personal loans and credit cards, effective since 1 September 2017; the stricter LTV rules for mortgage loans effective since April 1, 2019; as well as the Household Debt Clinic loan restructuring program, will help enhance credit quality relating to household loans, and help ease households' financial burden.

C.3 Structural Reforms to Boost Potential Growth

40. The Thailand 4.0 scheme and the EEC flagship projects are key strategic initiatives, and their implementation should be ramped up (see Box B: Thailand's Eastern Economic Corridor and its Prospects). While the EEC Act has been passed and the development plan formulated, implementation has been weak and behind schedule. The Public Private Partnership (PPP) model has been adopted as the project finance modality for the complex mega-infrastructure projects. However, the capacity of the implementing agencies and project owners to design, manage, and carry out the projects should be enhanced in line with the ambitious scale and timeline of the initiatives. In this regard, tapping into the external expertise of the development partners in the financing and programming of the projects could provide an additional boost to expediting the pace of the infrastructure projects. Also, up-skilling and re-skilling of the workforce are needed to prepare for the job requirements of the higher technology target industries. In addition to the EEC and transport infrastructure projects, Thailand should also increase its investment in water infrastructure and management, in view of the huge losses and economic damage caused by more frequent and severe storms and flooding induced by climate change.

Box B. Thailand's Eastern Economic Corridor and its Prospects³¹

The Eastern Economic Corridor (EEC) is a special economic region that plays an important role in Thailand. The EEC Development Plan under the scheme of Thailand 4.0 intends to help Thailand break out of the middle-income trap. This project aims to transform eastern Thailand into a key investment, technology, and transportation hub of the country and the ASEAN region. The EEC will be based on three pillars: 1) physical infrastructure to support transportation, logistics and public utilities; 2) new industry development; and 3) investment incentivization and facilitation. It will initially focus on three eastern provinces, namely Chachoengsao, Chonburi and Rayong.

³¹ This box is prepared by Pyae Nandar Aung (Associate).

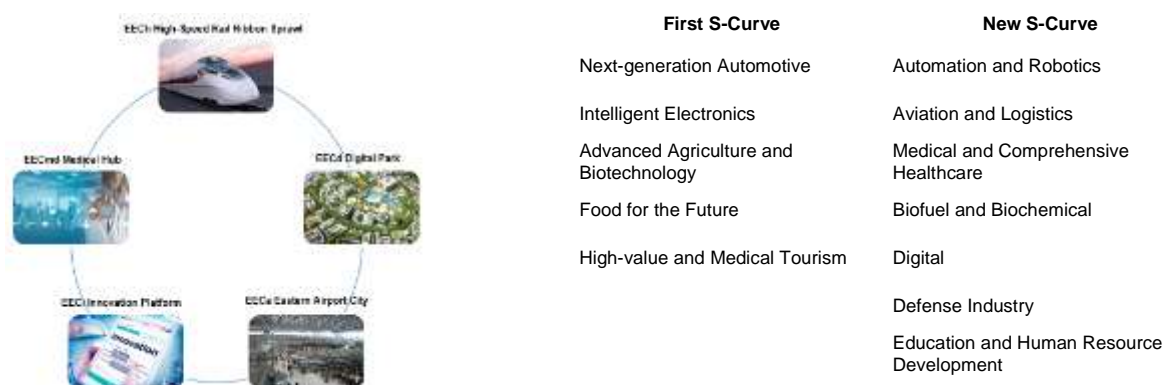
Thailand is focusing on becoming a value-based and innovation-driven economy. There are 12 targeted industries. These industries aim to enhance the competitiveness of the country's current strengths through technological innovation, and to accelerate growth of the new industrial base. Originally, there were 10 targeted industries: the first five S-curve industries (the five existing industries: the next-generation automotive, the intelligent electronics, the advanced agriculture and biotechnology, the food processing, and high wealth and medical tourism), and new S-curve industries (the five advanced industries: the robotics, aviation and logistics, comprehensive healthcare, bio fuel and bio chemical, and the digital industry) (Source: www.eeco.or.th/en/content/targeted-industries). Recently, education and defense were added to the new S-curve industries: education, because the development of the EEC critically hinges on human resource development, and defense, to ensure broad-based security of the EEC amid all these technology disruptions and technology war tensions.

The government has been working to attract more investments and contributing more to the implementation of projects under the EEC. It initially established five Promoted Zones for Specific Industries and 21 Promoted Zones for Targeted Industries, to draw investments and provide opportunities for all investors. All investors in the 12 targeted industries will also be eligible to explore additional privileges. The 2018 EEC Act provides that investors in the EEC qualify for tax incentive packages, including corporate tax reduction or exemption, and five to eight years of regular tax exemption for eligible activities in the EEC. Investors and overseas professionals are taking part in EEC projects also receive privileges with regard to personal income tax, import duties on machinery and raw materials, financial transactions, and land and real estate ownership.

Considering the ambitious timeline of the EEC's implementation plan, many of the deadlines have passed since 2017. Currently, the implementation of the following major mega projects is in full swing, although it is still uncertain whether the estimated deadlines can be met.

High-speed Rail Link: This project has been approved by the Cabinet. The contract was won by a consortium led by Charoen Pokphand Holdings and the State Railway of Thailand has already signed a contract with Charoen Pokphand Holding on October 24, 2019. The Rail Link will provide fast and convenient travels with the velocity of 250km per hour between the three major international airports of Don Mueang, Suvarnabhumi and U-Tapao.

Figure B1. Five Promoted Zones and 12 Targeted Industries



U-Tapao airport: The EEC Policy Committee will continue the redevelopment of U-Tapao airport under the Eastern Airport City project, having invited bids for the redevelopment work. The winning bid is expected to be declared by the end of next month. The airport will be renovated and extended into a greenfield development. It will serve as the third international airport of Bangkok and will be positioned as the regional aviation hub between Thailand and major partners in Asia.

Maintenance, Repair and Overhaul (MRO) Center: The Thai government has been recruiting MRO personnel. Thai Airways International Plc (THAI) is expected to sign a pact with Airbus to form a joint-venture Company to handle the maintenance, repair and overhaul (MRO) center at U-Tapao airport. The new MRO center will have the capacity to service 80 to 100 aircraft a year. In addition, the national carrier is developing its own MRO campus near U-Tapao airport, with the aim of making it an advanced aerospace center.

Map Ta Phut Industrial Port Phase-III: The Industrial Estate Authority of Thailand has already signed a contract with PTT-Gulf Consortium on October, 2019. The annual capacity of Map Ta Phut Industrial Port Phase-III will be approximately 20 million tons of the Liquefied Natural Gas (LNG) and 11 million tonnes of the liquid material terminal.

Laem Chabang Port Phase-III: A contract for the third phase of the Laem Chabang seaport is expected to be signed by next month. The third-phase development will yield an initial annual capacity of four million Twenty-foot Equivalent Unit-TEUs, with an eventual full capacity of up to 18.1 million TEUs. It will become one of the best seaports in the world, offering an automated system and advanced full-scale services.

The EEC plan also expects to provide better working and living environment by carrying out a Smart City Project, in order to attract high value-added industries. The EEC vision includes being developed as an environment-friendly region for its residents, apart from boosting innovation and promoting 4.0 industries. For that reason, it aims to improve educational services, public health care, internet accessibility and other types of infrastructure. The Digital Economy and Society Ministry expects to accelerate 5G adoption in 2020.

The EEC flagship initiatives are a welcome development, and the challenges are significant amid an uncertain global and domestic environment.

Figure B2. EEC Timeline and Infrastructural Investment



First, the government aims to reduce its dependence on debt financing in favor of using a PPP-based model. Hence, how to crowd in domestic and foreign private investments would be crucial. On this front, uncertainty over the future revenue streams makes it difficult for private investors to take on the risks associated with the uncertainties so far. In addition, fast-rising land prices, red tapes, and a shortage of skilled labor, also combine to make the EEC less attractive.

Second, it is also crucial to understand and address socio-economic concerns with regard to the project. Some local communities want to see more residential zones and green zones so as to ease pollution, develop agri-tourism, and help prevent illnesses related to EEC development. Overall addressing environmental concerns would be important, as local residents are worried about toxic waste and pollution.

Third, nation-wide development plan beyond the EEC flagship project would help maintain and strengthen support from the people. Considering the discrepancies between urban and rural areas, large conglomerates and SMEs, export and domestic sectors, there is further room for inclusive growth in terms of industrial and regional policies. Further efforts beyond the EEC zone would be crucial in balanced growth in the medium term in Thailand.

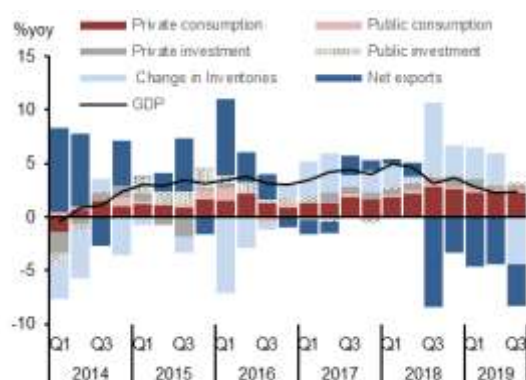
41. **Efforts to enhance potential growth should be continued in order to achieve the goal of becoming a developed country as aspired to under the 20-year National Strategy.** Labor productivity should be increased by improving the quality of education, especially in science and technology, and by expanding vocational training, while more resources should be devoted to innovation and research and development. To cope with the rapid pace of aging, a coordinated package of reforms is necessary, including extending the retirement age, mobilizing previously underemployed labor in the countryside, welcoming high-skilled foreign workers, and improving the working conditions and productivity of low-skilled migrant workers. There should be determined efforts to reduce inequality and promote inclusive growth. The spillover effects of the EEC to other regions in the country should also be enhanced. Regional linkages and connectivity can continue to be deepened, while trade agreements such as the Regional Comprehensive Economic Partnership, can help diversify trade further and make exports more resilient (see Selected Issue 2: Thailand's Deepening Economic Connectivity with Neighboring Countries).

42. **To further strengthen the growth potential, the services sector should be liberalized to a greater extent to attract more investment and encourage the development of e-services based on digital technology.** Significant past strides in manufacturing and trade liberalization have helped spawn the Eastern Seaboard and the automotive ecosystem. However, services sector liberalization, including the relaxation of foreign ownership restrictions, has not advanced at the same pace, and many services in such sectors as health, education, logistics, and telecommunications, are still protected and have scope for more foreign investment and competition. There are also restrictions on professional services such as architecture, engineering and management consulting, health care, accounting, and legal services which should be reviewed. The continued development of fintech can help reduce transaction costs and improve efficiency in the financial and retail sectors. The government's deregulation and regulatory guillotine program should also be expedited to help improve the investment climate.

Appendix 1. Selected Figures for Major Economic Indicators

Figure 1.1. Real Sector

Economic growth slowed more than expected.



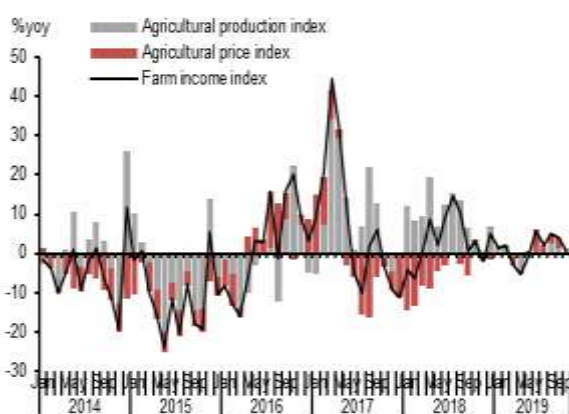
Source: National Economic and Social Development Council

Private consumption moderated...



Source: CEIC; Bank of Thailand; University of the Thai Chamber of Commerce

... amid tepid farm income growth...



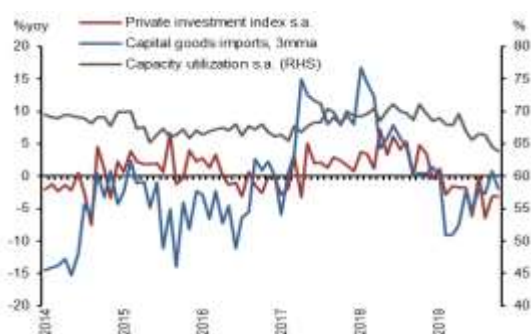
Source: Office of Agricultural Economics; Bank of Thailand; AMRO staff calculations

... while labor income growth moderated in Q2.



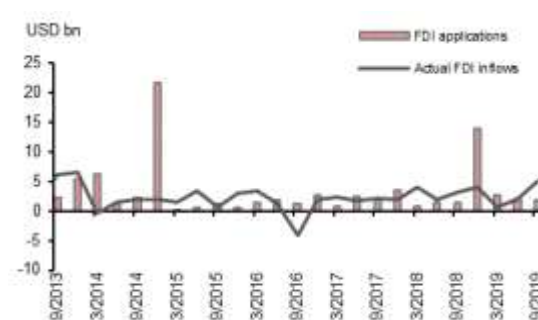
Source: National Statistical Office, Bank of Thailand

Private investment indicators declined.



Source: CEIC; Board of Investment; Bank of Thailand

However, FDI applications and actual FDI inflows have increased somewhat recently.

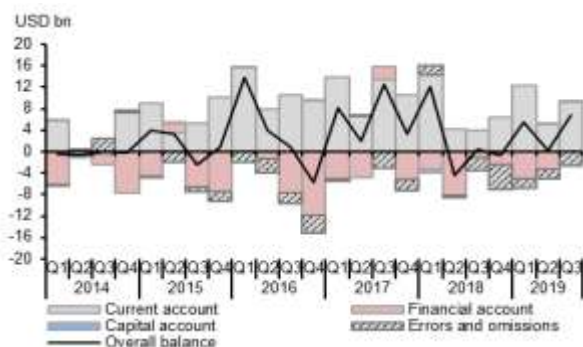


Note: The value of FDI applications was converted from Thai baht terms to USD by using a monthly average rate of the Thai baht against the USD

Source: CEIC; Board of Investment; Bank of Thailand

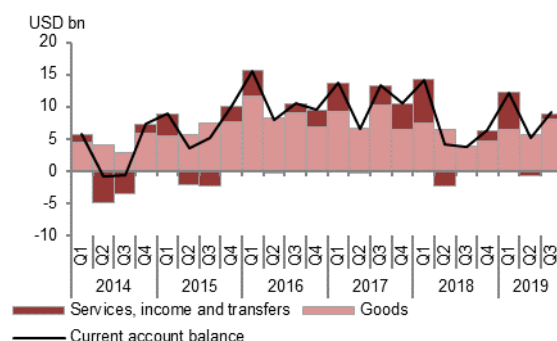
Figure 1.2. External Sector

The Balance of Payments surplus widened in the first nine months of 2019.



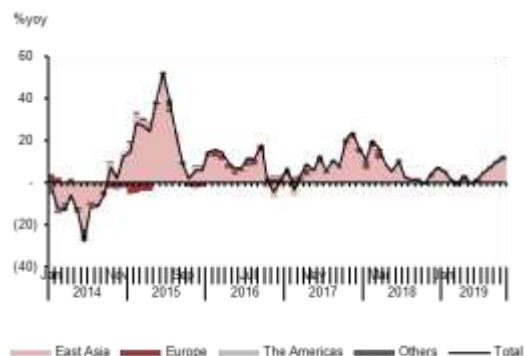
Source: CEIC; Bank of Thailand

The current account surplus widened in the first nine months of 2019 as imports contracted more than exports.



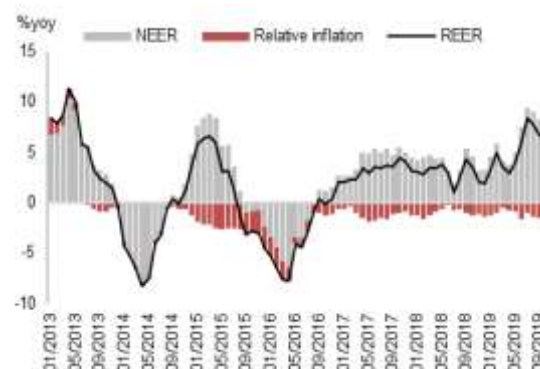
Source: CEIC; Bank of Thailand

Tourist arrivals have been recovering.



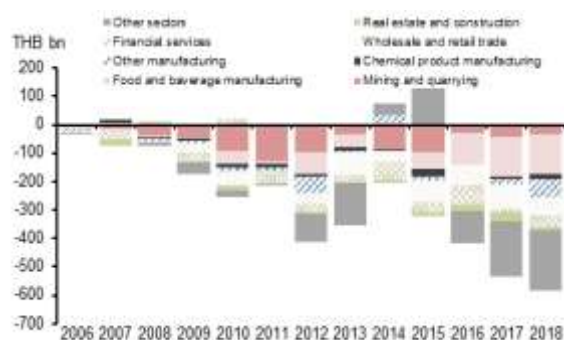
Source: CEIC; Department of Tourism, Ministry of Tourism and Sports

REER has been increasing since 2017.



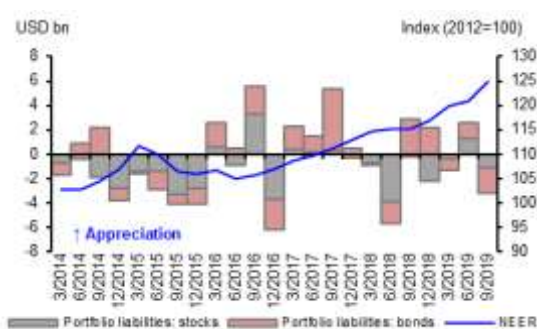
Source: CEIC; Bank of International Settlements; AMRO staff calculations

Thai residents' direct investment abroad has been increasing in recent years.



Source: CEIC; Bank of Thailand

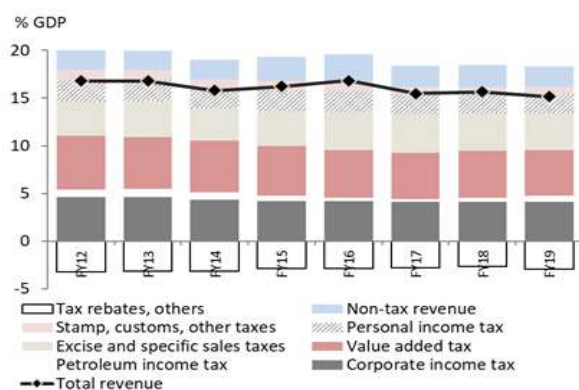
The baht has attracted inflows during episodes of risk aversion against emerging markets.



Source: CEIC; Bank of Thailand

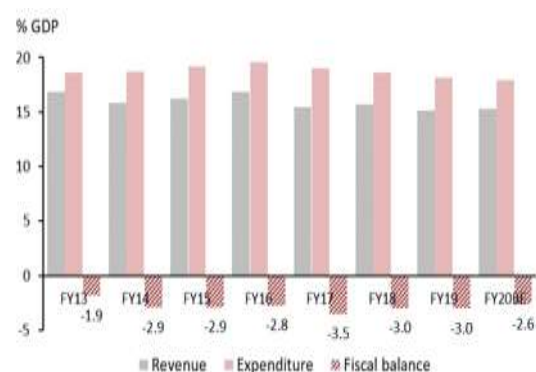
Figure 1.3. Fiscal Sector

The revenue to GDP trend has been declining from FY2012 to FY2019.



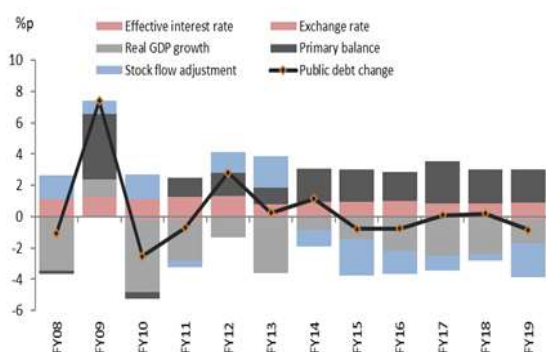
Source: CEIC; Fiscal Policy Office

The expenditure to GDP ratio has also fallen in recent years, while the fiscal deficit, which has been falling, is budgeted to further decline in FY2020.



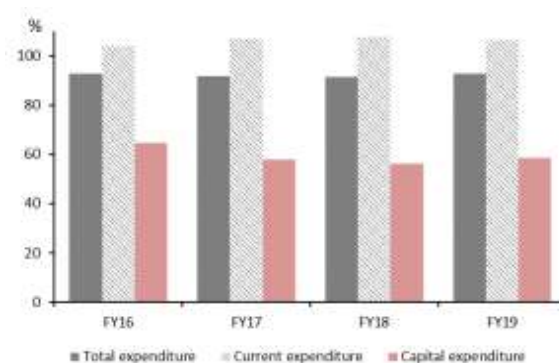
Source: CEIC; Fiscal Policy Office; Bureau of Budget

The public debt-to-GDP ratio has been largely stable.



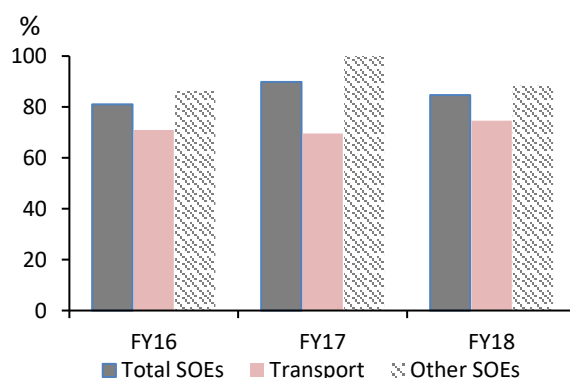
Source: CEIC; Public Debt Management Office; AMRO staff calculations

The disbursement rate of capital expenditure has been consistently low...



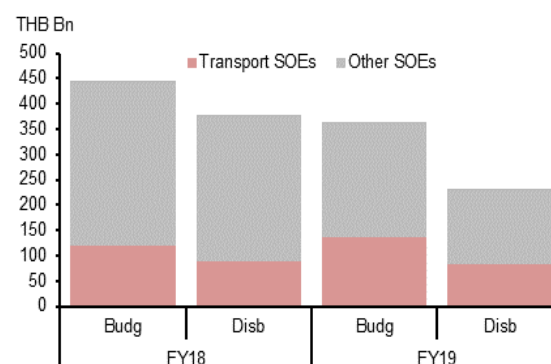
Source: Fiscal Policy Office; Bureau of Budget; AMRO staff calculations

... as has the disbursement of SOEs' investment budgets.



Source: CEIC; State Enterprise Policy Office; AMRO staff calculations

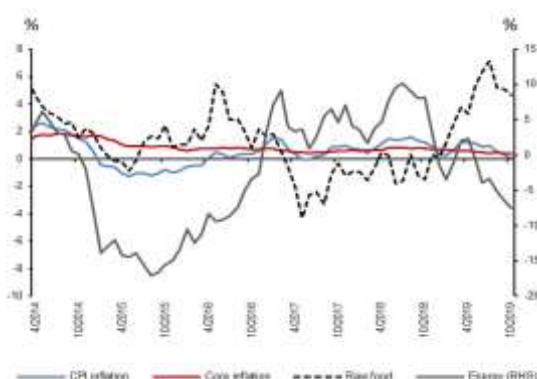
Although the transport SOEs' budget has increased for FY2019, the disbursement rate to date has remained low.



Source: CEIC; State Enterprise Policy Office; AMRO staff calculations

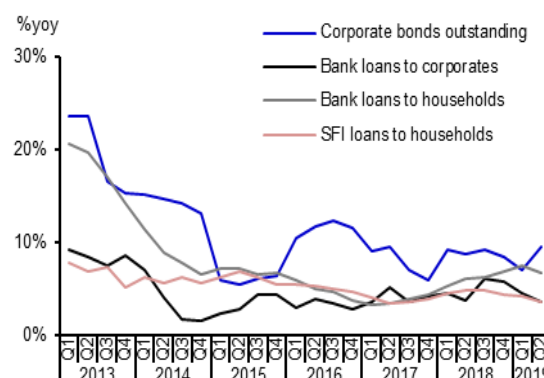
Figure 1.4. Monetary and Financial Sectors

Headline inflation has been low, amid low core inflation and soft oil prices.



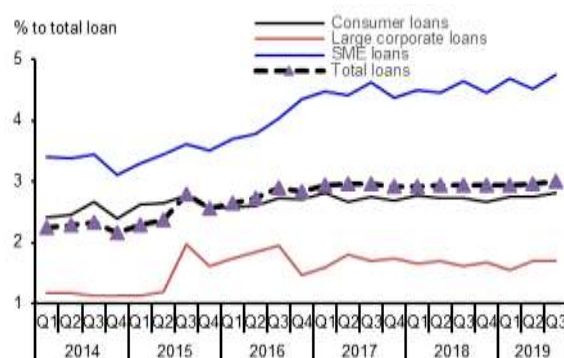
Source : CEIC; Bureau of Trade and Economic Indices

After picking up in 2018, loan growth (except household loans) moderated in Q1 2019.



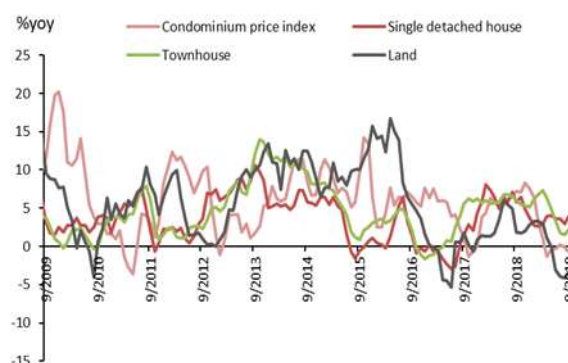
Source: Bank of Thailand; AMRO staff calculations

SME loan NPLs increased.



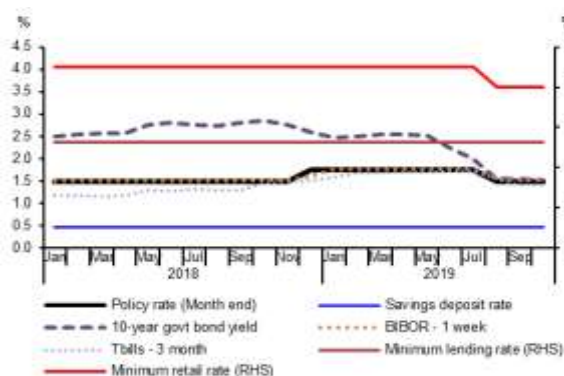
Source: Bank of Thailand

Growth in housing prices has moderated following the adoption of stricter LTV rules.



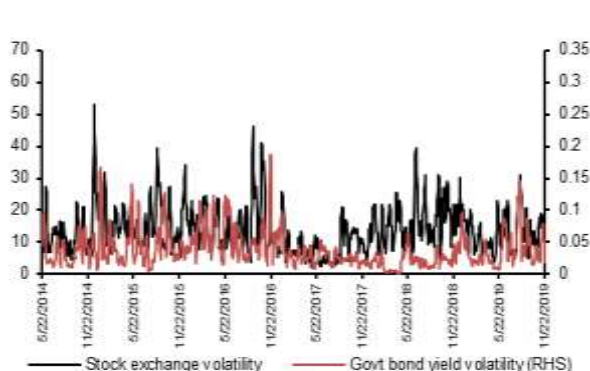
Source: CEIC; Bank for Thailand

Following the policy rate cut in August, the minimum retail rate has fallen while savings deposit rate remained flat.



Source: CEIC; Bank of Thailand

While volatility in financial markets has picked in recent months, it remained moderate compared with past episodes.



Source: CEIC; Stock Exchange of Thailand; Thai Bond Market Association; AMRO staff calculations

Appendix 2. Selected Economic Indicators for Thailand

	2015	2016	2017	2018	Projections	
					2019	2020
	(in percent change unless specified)					
Real sector and prices						
Real GDP	3.1	3.4	4.0	4.1	2.7	3.1
Final consumption	2.4	2.7	2.3	4.0	3.5	3.5
- Private sector	2.3	2.9	3.0	4.6	3.9	3.7
- General government	2.5	2.2	0.1	1.8	2.2	2.9
Capital formation	4.1	2.8	1.8	3.8	2.8	3.9
- Private sector	-2.1	0.6	2.9	3.9	3.1	3.8
- General government	28.4	9.5	-1.2	3.3	2.1	4.3
Exports of goods and services	1.6	2.8	5.4	4.2	-1.7	1.7
Imports of goods and services	0.0	-1.0	6.2	8.6	-1.3	2.2
Labor market						
Unemployment rate (in percent, period average)	0.9	1.0	1.2	1.1	1.0	0.9
Prices						
Consumer price inflation (period average)	-0.9	0.2	0.7	1.1	0.8	1.0
External sector	(in billions of U.S. dollars unless specified)					
Current account balance	27.8	43.4	44.0	28.5	30.2	28.7
(in percent of GDP)	6.9	10.5	9.6	5.6	5.5	5.0
Trade balance	26.1	35.8	32.6	22.4	22.6	19.5
Exports, fob	213.4	213.5	233.7	251.1	245.1	250.9
Imports, fob	187.2	177.7	201.1	228.7	222.5	231.4
Services, net	15.6	20.3	24.3	22.5	24.2	25.4
Receipts	58.1	63.8	71.0	77.5	83.2	87.4
Payments	42.5	43.5	46.7	54.9	59.0	62.0
Primary income, net	-20.6	-19.4	-20.5	-24.5	-25.0	-25.1
Secondary income, net	6.7	6.8	7.5	8.0	8.4	8.9
Financial account balance	-16.8	-20.8	-12.5	-14.9	-10.9	-19.5
Direct investment, net	3.9	-10.6	-10.3	-8.0	-2.4	-7.0
Portfolio investment, net	-16.5	-2.8	-2.1	-5.9	-5.5	-5.0
Other investment, net	-4.2	-7.5	0.0	-1.0	-3.0	-7.5
Errors and omissions	-5.1	-9.8	-5.4	-5.6	-4.0	-4.0
Overall balance	5.9	12.8	26.0	7.3	15.3	5.2
Gross official reserves excluding net forward position	156.5	171.9	202.6	205.6	223.1	226.5
(In months of imports of goods & services)	8.2	9.3	9.8	8.7	9.1	9.0
Total external debt in percent of GDP	32.0	32.5	36.7	35.5		
Fiscal sector /1	(in percent of FYGDP)					
Revenue	16.2	16.8	15.5	15.7	15.2	15.3*
Expenditure	19.1	19.6	19.0	18.7	18.2	17.9*
Budget balance	-2.9	-2.8	-3.5	-3.0	-3.0	-2.6*
Public Debt	42.6	42.6	41.9	41.9
Monetary sector	(in percent)					
Policy rate (percent per annum, end of period)	1.5	1.5	1.5	1.75	1.25**	...
10-year government bond yield (end of period)	2.6	2.8	2.6	2.6	1.5**	...

Note: 1/ Fiscal year 2019 runs from 1 October 2018 to 30 September 2019.

* Budget number

** Latest number available

Source: Data provided by Thai authorities; AMRO staff estimates

Appendix 3. Data Adequacy for Surveillance Purposes: A Preliminary Assessment

Surveillance Areas	Data Availability ⁽ⁱ⁾	Reporting Frequency/ Timeliness ⁽ⁱⁱ⁾	Data Quality ⁽ⁱⁱⁱ⁾	Consistency ^(iv)	Others, if any ^(v)
National Account	Available	Quarterly, six weeks after the end of the reference quarter, based on an advance release calendar.	-	-	-
Balance of Payments (BOP) and External Position	Available	BOP data are reported monthly with a two-month lag (one-month lag for trade data), released on last business day of the month. Official reserve assets reported weekly with a one-week lag. External debt reported quarterly with a one quarter lag. Exchange rates reported daily with at 06.00 pm (BKK-GMT+07:00) on that working day.	-	-	-
State Budget and Government/External Debt	Available	Planned budget announced before the beginning of the fiscal year in October (annual). Budget implementation (expenditure and revenue) reported monthly with a one-month lag. Government/external debt reported monthly with a one-month lag.	-	-	-
Money Supply and Credit Growth	Available	Monetary aggregates and monetary survey reported monthly with a one-month lag. Credit and deposit data reported monthly with a six-week lag.	-	-	-
Financial Sector Soundness Indicators	Available	"Performance of the Thai Banking System", as well as related data, reported quarterly by the BOT with a quarter lag.	-	-	-
State-Owned-Enterprises' Statistics	Available	(1) State Enterprise Key Indicators (quarterly, in Thai) by the State Enterprise Policy Office (SEPO) under the MOF. (2) State Enterprise Review published annually by SEPO for individual SOEs as well. (3) Monthly and (4) Quarterly report on data and performance review (respectively) of Specialized Financial Institutions (no fixed calendar of release); Listed companies must follow stock exchange disclosure requirements.	-	-	-

- Notes:
- (i) Data availability refers to whether the official data are available for public access by any means
 - (ii) Reporting frequency refers to the periodicity of data publication. Timeliness refers to how up-to-date the published data are relative to the publication date
 - (iii) Data quality refers to the accuracy and reliability of the available data given the data methodologies are taken into account
 - (iv) Consistency refers to both internal consistency within the data series itself and its horizontal consistency with other data series of either same or different categories
 - (v) Other criteria might also apply, if relevant. Examples include but are not limited to potential areas of improvement for data adequacy.

Source: AMRO staff compilation. This preliminary assessment will form the "Supplementary Data Adequacy Assessment" in the EPRD Matrix.

Annexes: Selected Issues

Annex 1. Long-Run Factors Behind Thailand's Inflation Dynamics^{32, 33}

1. **Thailand's headline inflation has been very low in recent years and is likely to miss the lower limit of BOT's targeted range in 2019 (see Figure A1.1 and Figure A1.2).** Why is Thailand's inflation low? Are there structural factors behind Thailand's inflation dynamics? Have global factors played a role in the subdued inflation pressure? Has the Phillips curve flattened? This note attempts to contribute to the discussions on these questions.

2. **In this study, we use a time-varying open-economy Phillips curve model to analyze if the Phillips' curve has flattened, and to see what role global output dynamics have played in Thailand's inflation dynamics.** After that, we use detailed micro-data to obtain a more nuanced picture of price change heterogeneity across different goods and services in Thailand's consumer price index (CPI) basket. The final sub-section summarizes the findings of the study and concludes with implications for policy.

Figure A1.1 Thailand CPI



Source: : CEIC; Bureau of Trade and Economic Indices

Figure A1.2 Inflation Components



Source: CEIC; Bureau of Trade and Economic Indices

Has Thailand's Phillips' Curve Flattened?: The Role of Global Factors in Thai Inflation Dynamics

3. **Thailand's inflation has fallen and has become more stable since the 1990s (Figure A1.3).** Headline inflation has fallen from an average of 5.0 percent in 1990 to 1999 to 2.1 percent in 2000 to 2018, while the standard deviation of inflation declined from 2.1 to 1.8 over the same periods. Meanwhile, core inflation has decreased from an average 5.0 percent to 1.1 percent, with standard deviation falling from 1.4 to 0.7 during the same period.

4. **Thailand's inflation pattern mirrors the inflation process around the world, where inflation has also fallen considerably and has become more stable (see, for example, Borio and Filardo 2007).** Figure A1.4 shows that the year-on-year average of global inflation fell from 20.2 percent in 1990-1999 to 3.9 percent in 2000 to 2018, with advanced economies'

³² This selected issue is prepared by Ruperto Pagaura Majuca (Senior Specialist).

³³ In last year's AMRO Annual Consultation Report Thailand – 2018, a Selected Issue looked into Thailand's private consumption and some of its key determinants. Since AMRO would like to study Thailand's consumption, inflation and growth from diverse perspectives, this present Selected Issue is devoted into looking at some long run factors behind Thailand's inflation dynamics.

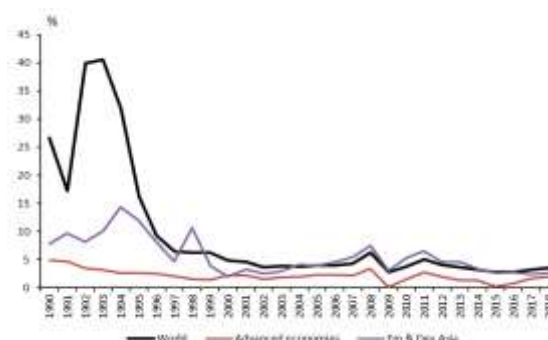
CPI inflation falling from 2.9 percent to 1.8 percent and inflation in emerging and developing Asia (EDA) falling from 9.0 percent to 3.9 percent during the same period.³⁴ Inflation rates were much higher globally than in EDA during the 1980s to mid-1990s, reflecting the high inflation rates of Latin America and the Caribbean. That said, even for Latin America and the Caribbean, inflation rates fell from an average of 150.4 percent in 1990 -1999 to 5.8 percent in 2000-2018. The standard deviation of global inflation and inflation across different regions of the world fell uniformly across the same period.

Figure A1.3 Thailand's Annual Mean Inflation



Note: Figures are 5-year rolling averages.
Source: CEIC; Bureau of Trade and Economic Indices; AMRO staff calculations

Figure A1.4 Worldwide Inflation Mean



Source: CEIC

5. **Dramatic changes in the inflation process worldwide coincided with increased globalization in product and factor markets, including the spread of e-commerce.** As emerging economies got integrated into the global supply chain, and the rise in e-commerce and tradability of services, it is natural to hypothesize that increased globalization have caused inflation to trend downward and become more stable worldwide, and that country-specific slack conditions now matter less with regard to domestic inflation as global factors have increased in significance. In short, due to globalization, inflation trend has fallen and the Phillips curve has flattened. Global factors can influence domestic inflation through several channels. The recent dramatic increase in U.S. shale oil production may have resulted in the structural transformation of global oil markets (Manescu and Nuno 2015) and have caused significant downward pressure on oil prices, for example, by as much as 73 percent of the oil price declines between June 2014 to February 2016 (Bataa and Park 2017)(the “shale oil effect”). The low global oil prices, in turn, are translated into lower domestic fuel oil prices via the import channel, and more generally, into a lower overall CPI. The entry of low-cost manufacturers such as China into the global market implies lower pricing power for local manufacturers (Cote and de Resende 2008, Bernanke 2007)(the “China effect”). This can arise from direct supply-side effects (cheaper imported goods from China) on the CPI basket, indirect supply-side effects (competition from China goods and from Chinese wages [labor cost channel]), and demand side effects (the effect of China’s output gap on oil and non-oil inflation, and the domestic output gap) (Cote and de Resende 2008). Intense competition associated with the entry of major international retailers and the integration of production and consumption networks resulted in lower retail goods price inflation (Igan and

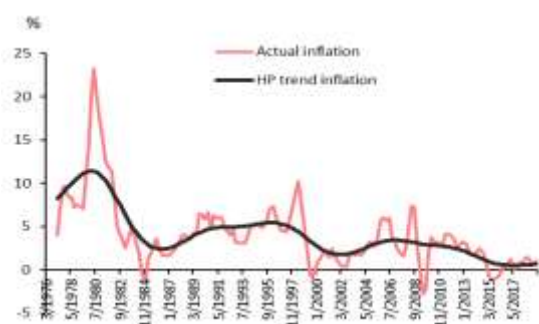
³⁴ Meanwhile, Thailand’s headline inflation fell from 3.7 percent to 1.7 percent, almost as low as the average for advanced economies.

Suzuki 2007; Basker 2005)(the “Wal-Mart effect”). Competition from online retailers led to a lowering of the price mark ups of brick-and-mortar retailers, which exerted downward pressure on inflation (Cavallo 2018) (the “Amazon effect”).

6. **The change in the inflation process coincided as well with improved monetary policy making worldwide.** As argued by several authors, the greater emphasis on inflation control and the broad adoption of improved monetary policy making may have also helped bring inflation rates down (see Stock and Watson 2010; Fischer 2015).

7. **Thailand’s economy has become more integrated with the rest of world over the decades and it has adopted an inflation targeting since 2000.** The export and import of goods as a percentage of GDP increased from 37.2 percent and 47.9 percent, respectively, in 1995, to 58.3 percent and 56.8 percent, respectively, in 2018. Tourism receipts has increased from 5.6 percent of GDP in 2000 to 11.5 percent of GDP in 2018. Meanwhile, the number of migrant residents in Thailand grew from 528,700 in 1990 to 3.9 million in 2015 (United Nations Thematic Working Group in Thailand 2019). Also, e-commerce has grown at 8.6 percent per annum in Thailand, making the country one of the top e-commerce markets in Southeast Asia with a value of USD23 billion (Manopimoke et al 2018). Thus, it is very much possible that Thailand’s increased integration with the rest of the world has caused its inflation rate to trend downwards (see Figure A1.5), and that domestic slack would become less in important in driving the Thai inflation while global output gaps would increase in importance, flattening the Phillips curve. Also, the adoption of an inflation targeting framework could conceivably have helped contain the second-round effects of inflation and better anchored inflation expectations.

Figure A1.5 HP Trend Inflation



Source: CEIC; Bureau of Trade and Economic Indices

Figure A1.6 Estimated Time Varying Phillips Curve Coefficient, κ_t



Source: AMRO staff calculations

8. **Below, we use the open-economy Phillips curve (see e.g. Borio and Filardo 2007, Matheson and Stavrev 2013) to analyze the drivers behind Thailand’s inflation dynamics.** To analyze how Thailand’s inflation process has evolved, we employ a time-varying-parameters version of the model, similar to Matheson and Stavrev (2013). The inflation process is assumed to be governed by:

$$\pi_t = \pi_t^e + \kappa_t(y_t - \bar{y}_t) + \gamma_t(Gap_t^G) + \varepsilon_t^\pi \quad (1)$$

where π_t is the CPI inflation rate, π_t^e is the inflation expectations, y_t is the output growth, and \bar{y}_t is the trend output growth. Gap_t^G is the world output gap, defined as the trade-weighted output gaps of Thailand's trading partners,³⁵ thus,

$$Gap_t^G = \sum_j w_{jt} Gap_j \quad (2)$$

where w_j are the weights based on the ratio of the sum of Thailand's imports and exports with country j to Thailand's total imports and exports, thus

$$w_{jt} = \frac{import_{jt} + export_{jt}}{(Total\ imports\ and\ exports)_t} \quad (3)$$

The following economies are included as they are Thailand's top trading partners: China, U.S, EU, Japan, Korea, UK, Australia, Hong Kong, Malaysia, Philippines, Singapore, Indonesia, and Taiwan.

The inflation expectation, π_t^e , is assumed to evolve as:

$$\pi_t^e = \theta_t \bar{\pi}_t + (1 - \theta_t) \pi_{t-1}^4 \quad (4)$$

where π_{t-1}^4 is the yoy change in CPI inflation and $\bar{\pi}_t$ represents the long-run inflation expectations.

$y_t - \bar{y}_t$ is assumed to be an AR(1) process, thus:

$$(y_t - \bar{y}_t) = \rho(y_{t-1} - \bar{y}_{t-1}) + \varepsilon_t^{y-\bar{y}} \quad (5)$$

with

$$\bar{y}_t = \bar{y}_{t-1} + \varepsilon_t^{u*} \quad (6).$$

The non-linear extended Kalman filter is employed to estimate the time-varying parameters and the unobservable state variables of the above system of equations (see Matheson and Stavrev 2013 for details). The observables are the seasonally adjusted quarterly CPI, real GDP growth, and Gap_t^G data from Q1 1996 to Q2 2019. The estimation is performed using RATS 10.

9. **Our initial estimation results suggest that due to increased integration in global markets, domestic slack conditions have played a reduced role in the determination of Thailand's inflation dynamics, flattening the Phillips curve.**³⁶ As Figure A1.6 shows, the time varying estimate of κ_t fell from early 2000 to 2019.³⁷ Meanwhile, the world output gap coefficient, γ_t , appears to have increased somewhat (Figure A1.7). This is not surprising considering that as mentioned above, Thailand has become more integrated into the world economy over the decades through trade, tourism, and labor immigration channels. Thus, it will not just be domestic demand and supply conditions that will matter. Instead, world demand

³⁵ Each trading partners' output gaps are calculated using Hodrick-Prescott filter on seasonality-adjusted real GDP series.

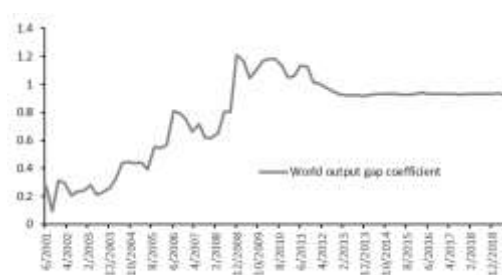
³⁶ Other researchers have also found that the Phillips curve had flattened in many countries (see Borio and Filardo 2007), including the US (Matheson and Stavrev 2013). For Thailand, other authors also have reached the same conclusion (see Manopimoke and Direkudomsak 2015; Manopimoke et al 2018)

³⁷ Figure A1.6 also suggests the Kalman-filtered estimate of κ_t may have decreased during the global financial crisis (GFC), similar to the results by Matheson and Stavrev (2013) for the U.S. One hypothesis for this result is that the GFC may have lowered workers' perception of their pricing power and changed their attitude towards job insecurity, and thus weakened the sensitivity to seeking higher pay in response to tightened labor market (see Cunliffe 2017).

conditions would also exert an influence on domestic inflation while supply factors elsewhere would be also relevant in determining domestic wage mark-ups. Domestic slack conditions alone would be an incomplete picture of the real drivers behind the inflation dynamics.

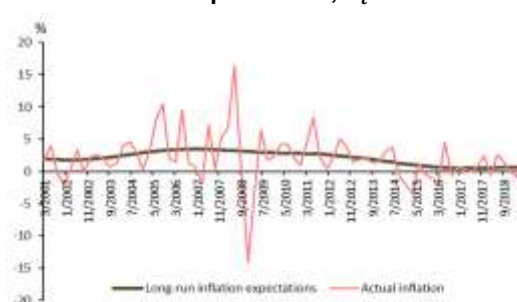
10. **Our estimation results also suggest long-run inflation expectations have trended downward over the years (Figure A1.8).** As pointed out by other authors,³⁸ it is possible that both globalization and improved monetary policy-making have contributed to the downward trend in inflation expectations, as increased credibility that monetary authorities are committed to the inflation target helps to anchor inflation expectations.

Figure A1.7 Estimated Time Varying γ_t Parameter



Source: AMRO staff calculations

Figure A1.8 Estimated Long Run Inflation Expectations, $\bar{\pi}_t$



Source: AMRO staff calculations

11. **In the next sub-section, we examine the detailed micro CPI data of Thailand in order to have a more nuanced analysis of the different individual components of the CPI basket.** Rather than looking only into the macro-level summary headline and core statistics, a closer and more detailed examination of the inflation of the individual products and services in the basket may help to shed light on micro level inflation dynamics. It is hoped that such an analysis will enrich the theoretical discussions above with more concrete and nuanced discussions on how globalization and e-commerce have affected individual components of the Thailand's CPI basket.

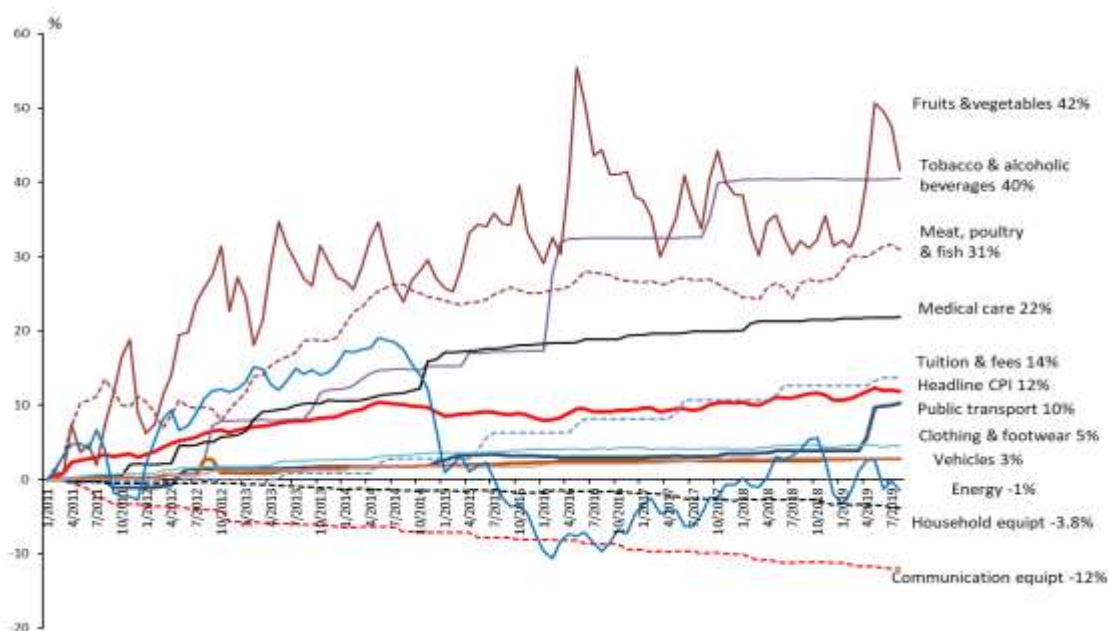
Thai Inflation Dynamics From Point of View of Micro-Level Data

12. **A detailed examination of the micro-level data reveals that the inflation process is not homogenous; rather, there is a lot of heterogeneity in price changes among the different components of the CPI basket.** Some of the volatile items such as fruits and vegetables and meat, poultry and fish saw the highest cumulative change in CPI, while other volatile items, like energy registered negative cumulative price changes. Between January 2011 and August 2019, fruits and vegetables recorded a cumulative price change of 41.6 percent, while the price of meat, poultry and fish increased by 30.9 percent. This compares with the overall CPI's cumulative price change of 11.8 percent. Energy registered a cumulative CPI decrease of 1.4 percent during the same period (Figure A1.9).

³⁸ See Matheson and Stavrev (2013) for the U.S. For Thailand, Manopimoke and Direkudomsak (2015) and Manopimoke et al (2018) found similar results as us.

13. **The cumulative price change of goods and services with more stable inflation tended to be low, except for tobacco and alcoholic beverages, and medical care services.** Thus, for goods in the core inflation basket such as household furniture and vehicles, both had a cumulative CPI change of only 2.8 percent, while clothing and footwear recorded only 4.5 percent, consistent with the globalization hypothesis articulated in the previous section.³⁹ Meanwhile services in the core inflation basket such as servants and maids, spa and relaxing, public transport, and tuition and fees, saw cumulative price changes of 5.3 percent, 8.4 percent, 10.3 percent, and 13.7percent, respectively during the period.

Figure A1.9 Cumulative Changes in Prices (M1 2011 – M8 2019) by CPI Item



Source: CEIC; Bureau of Trade and Economic Indices; AMRO staff calculations

14. **Price decreases are quite common, in particular, in the tradable household and communication equipments, and in energy sectors. Thus, relative price changes among the items in the basket are quite pervasive.** As Figure A1.9 shows, downward price rigidity does not seem to be a feature of many goods and services in Thailand's CPI basket. In consistency with the globalization story in the previous section, the prices of communications and household equipment have actually fallen instead of increased, recording total cumulative price decreases of 12.0 percent and 3.8 percent respectively during the periods. It is to be noted that communication and household equipment are also among the items more pervasively traded in the Internet, consistent with the "Amazon effect" discussed in the previous sub-section.⁴⁰ As mentioned, energy had a cumulative price decrease of 1.4 percent during the period. More specifically, fuel oil such as gasoline, gasohol, and diesel had a cumulative price

³⁹ Clothing and footwear are easy to transport and trade internationally. There is also intense competition in this sector from low cost producers such as China. Furthermore, retail competition is also intense for these goods (see Igan and Suzuki 2012). Being labor intensive, the labor migration channel may also be active in this sector. All these suggest that globalization effects may be strong in this sector.

⁴⁰ Researchers have found intense online competition in electronics and household goods (Cavallo 2018) and inflation is lower online than offline especially for information and communication technology products (Goolsbee and Klenow 2018).

decrease of 10.2 percent, consistent with the “shale oil effect” discussed in the previous section. Women’s leather shoes, and children’s shorts registered total price decreases of 3.4 percent and 2.1 percent respectively, while some services such as gardening had a cumulative price decrease of 3.7 percent. Meanwhile, domestically produced goods such as fruits and vegetables, tended to be the goods with the highest cumulative inflation in the CPI basket.

15. **The results of this sub-section suggests that the inflation patterns of the individual items in Thailand’s CPI basket are consistent with the globalization and e-commerce story discussed in the previous subsection.** The detailed level analysis of micro-level data helps one to understand that behind these summary headline and core statistics are heterogenous price changes among different products and services with very different inflation patterns. This individual inflation patterns are appear to be consistent with the global vs. domestic inflation drivers discussed in the preceeding sub-section.

Summary of Findings and Policy Implications

16. **The discussions above suggest that Thailand’s integration into the global economy and shift to the inflation targeting framework may have significantly contributed to its low inflation.** The trends of Thailand’s inflation and inflation expectations have trended downward over the decades. Globalization, competition, technology, as well as improved policy-making have contributed to the lowering of trend inflation and inflation expectations. Thus, structural factors such as the “shale oil effect”, “China effect”, “Amazon effect”, and labor migration have all played a part in causing inflation to move to a structurally lower trend than in the past. Also, as Thailand becomes more integrated into the world economy, domestic macro conditions have played a reduced role in the determination of Thailand’s inflation dynamics. Instead, excess global demand would exert a greater influence on domestic inflation, while supply conditions elsewhere would have an important influence on domestic wages. This has resulted in the flattening the Phillips curve. At the same time, the adoption of the inflation targeting framework in 2000 has helped lower inflation expectations, and control second-round effects of supply and demand shocks on inflation.

17. **Considering that structural factors such as globalization, technological developments, the growth in e-commerce and sharing economy, and the adoption of the inflation targeting framework, have caused headline and core inflations to be lower than in the past, the monetary authorities should review the current inflation target with a view to assessing if it is consistent with the structural factors.** Otherwise, the monetary authorities may inadvertently adopt a monetary and macroprudential policy mix which is too accommodative in terms of monetary condition but too tight in terms of financial stability, with adverse consequences for the economy and financial system. In particular, one should also consider whether monetary policy credibility will be better preserved if the monetary authorities do not consistently miss the inflation target. In this process, it would be important to look at the possible impacts that a changed inflation target might have on the inflation expectations of households and businesses.

18. **The effects of Thailand's aging population on its inflation dynamics would be an important topic for future research.**⁴¹ The literature is yet inconclusive as to whether aging lowers or increases a country's inflation trends.⁴² In the case of Japan, Anderson et al (2014) have found that aging is deflationary, and that although the demographic aging effects on inflation can arise from supply and demand side factors in both goods and factor markets, a decline in the labor force in Japan has caused its consumption and investment to fall. In Thailand's case, a significant part of the downward pressure on the long-term inflation trend has so far come from structural factors (such as globalization, e-commerce, etc.) and improved monetary policy making, as discussed above. Nevertheless, Thailand should not be complacent in assuming that demand side deflationary pressures arising from demographic changes will not grow stronger in the future.

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⁴¹ In last year's AMRO Annual Consultation Report Thailand – 2018, a Selected Issue analyzed the effect of population aging on Thailand's private consumption.

⁴² The secular stagnation hypothesis posits that aging tends to lower inflation, while the life-cycle theory theorizes that aging is inflationary (Bobeica et al 2017). Even the empirical evidence is contradictory as to whether aging is inflationary or deflationary (see papers cited in Bobeica et al 2017).

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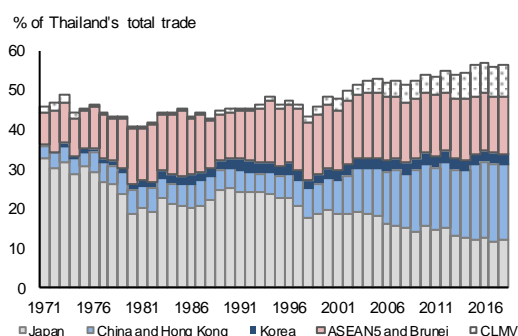
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Annex 2. Thailand's Deepening Trade and Investment Ties with the ASEAN+3 Region⁴³

19. **Economic and financial integration between Thailand and the rest of the ASEAN+3 region has made significant progress since 2000, and has accelerated further since the global financial crisis (GFC).** Thailand's regional trade has flourished in tandem with expanding cross-country direct investments and deepening global value chains. At the same time, Thai firms have expanded their overseas footholds actively, as reflected by the country's rising overseas direct investment (ODI) from 1.5 percent of domestic private capital stock in 2008 to 6.9 percent in 2015. This selected issue attempts to explore the developments of Thailand's regional trade and investment, with an emphasis on its growing integration with Cambodia, Laos, Myanmar and Vietnam (CLMV) since 2000.

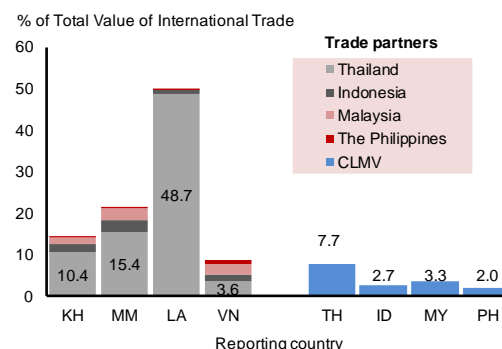
Development in Merchandise Trade and Deepening Global Value Chains

Figure A2.1 Share of Intraregional Trade in Thailand's Total Trade



Source: IMF Direction of Trade Statistics; Thailand's Ministry of Commerce; AMRO staff calculations

Figure A2.2 Share of Intraregional Trade between ASEAN-4 and CLMV Countries (2016)



Note: The latest data are as of 2016.
Source: UN Comtrade Database; AMRO staff calculations

20. **Thailand's intraregional merchandise trade has expanded significantly on the back of trade with CLMV countries and China in the recent period.** The intraregional trade in goods accounted for more than 50 percent of Thailand's total trade in 2018 (Figure A2.1). Since China's accession to the World Trade Organization in 2001, the share of bilateral trade with China has grown consistently, from around 5 percent of Thailand's total trade in 2001 to more than 15 percent in 2015. In addition, ASEAN's free trade agreements, the growing middle-class in other ASEAN countries, as well as sluggish economic activities in advance countries since the GFC, have spurred Thailand's intraregional trade, particularly with CLMV countries. Besides economic factors, geographical link as well as similarities in lifestyle and culture in the mainland ASEAN has led to larger trade linkages between Thailand and CLMV countries, compared with the other ASEAN-4 countries⁴⁴ (Figure A2.2). Different from other ASEAN+3 countries, economic connectivity between Thailand and Japan has been tightened through Japanese direct investment. Although the share of bilateral trade with Japan to Thailand's total trade, has declined overtime, the decline is mainly on the back of growing supply chains of

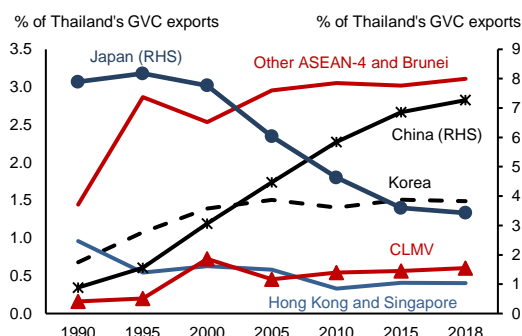
⁴³ This selected issue was prepared by Wanwisa May Vorrarakuljij (Specialist), and the box was prepared by Yang-hyeon Yang (Senior Economist).

⁴⁴ ASEAN-4 countries are Indonesia, Malaysia, the Philippines and Thailand.

Japanese heavy industries (Figure A2.4), including direct investment of Japanese SMEs, in Thailand⁴⁵.

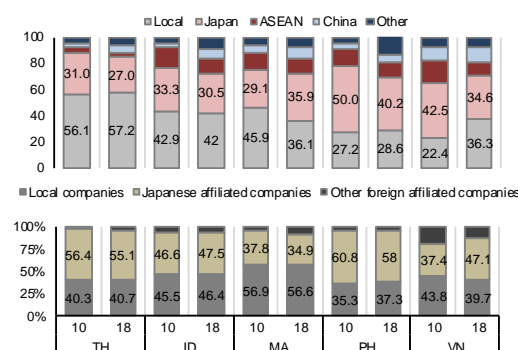
21. Thailand's manufacturing exports have become more integrated with regional supply chains over the last three decades. The share of ASEAN+3 economies' value-added input in Thailand's export products has trended upward, indicating tighter production networks between Thailand and other regional economies. The increase in the regional value-added share in Thailand's exports is contributed mainly by China and the other ASEAN-4 countries (Figure A2.3). China's rising contribution is partly due to the fact that the electronic and auto-part industries in Thailand form part of the supply chains of manufacturers in Chongqing and Chengdu.⁴⁶ The share of CLMV's value-added input, albeit small, inches up gradually, as most of Thailand's imports from these countries are in the form of natural resources, primary goods and raw materials.

Figure A2.3 Contribution of ASEAN+3 Value-added Input in Thailand's Exports



Note: The other ASEAN 4 countries are of Malaysia, Indonesia and the Philippines.
Source: UNCTAD-Eora GVC Database; AMRO staff calculations

Figure A2.4 Procurement Sources of Japanese Firms Located in Some ASEAN Countries



Note: The upper panel shows Japanese firms' overall procurement sources of raw materials and parts of Japanese firms as located in each ASEAN country, while the lower panel shows local procurement sources.
Source: JETRO

22. A deepening supply chain of Japanese industries in Thailand and other ASEAN countries has reduced Thailand's reliance on materials imported from Japan and tightened the regional production network. Japanese factories operating in Thailand have gradually increased the share of local materials procured from local firms and Japanese affiliates. Compared with other ASEAN countries, the share of local procurements in Thailand has been relatively high (Figure A2.4). Besides the Japanese ecosystem in Thailand, supply chains between Thailand and CLMV countries were also tightened by the "Thailand Plus One" strategy⁴⁷ of Japanese firms. Take for example Thailand's automotive industry, which has witnessed growing regional value chains through the Japanese's automotive affiliates in ASEAN. As Japanese auto-part and component companies have been expanding their affiliates across

⁴⁵ According to the Japanese Chamber of Commerce in Bangkok, its members grew to more than 1,700 firms in 2016 from around 200 firms in 1970.

⁴⁶ Thailand's Department of Trade Negotiation. (2015, October 12). Cross-border Trade between Thailand and Southern China: A New Driver of Thailand's Cross-border Trade (Thai version only). Retrieved on 15 November 2017, from http://www.asean thai.net/ewt_news.php?nid=4728&filename=index

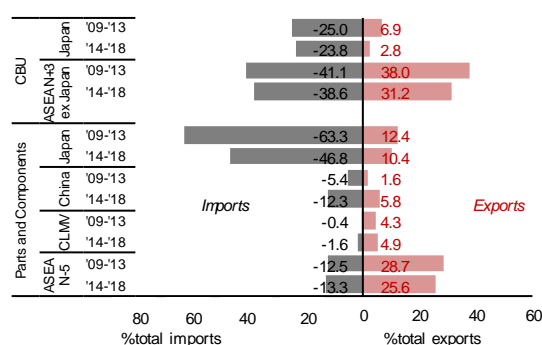
⁴⁷ Due to rising wages and a labor shortage in Thailand, many Japanese firms shifted labor-intensive units to CLMV countries while keeping main production bases in Thailand as the assembly, quality control and regional export hub.

ASEAN since 2012, the supply chains of the automotive industry in Thailand and other ASEAN countries have become stronger. While factories in Thailand are still mainly assembly plants of Complete Built-Up vehicle exports sold outside the ASEAN+3 region, their dependence on auto parts and components produced in ASEAN has increased over the past five years (Figure A2.5).

Thailand's Growing Overseas Direct Investment

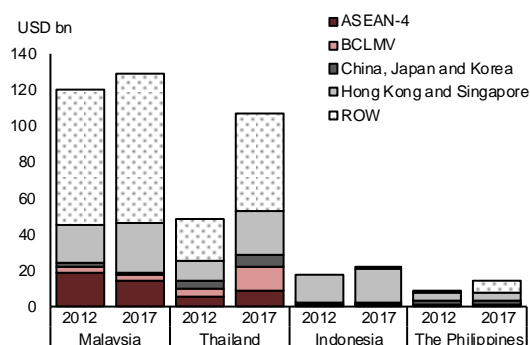
23. **Thailand's regional integration is also deepening through an expansion of its overseas direct investment in neighboring countries.** According to Wee (1997) and Cheewatrakoolpong et al. (2015), Thai corporates expanded their international footholds after the Bank of Thailand (BOT) liberalized the capital account in 1993. The main sectors were real estate, construction, finance and electronics. However, the Asian financial crisis in 1997 led to a significant decline of Thai ODI. Thai conglomerates have been expanding their overseas footholds actively again since 2008, driven by the recycling of a strong current account surplus while being spurred and facilitated by the BOT's foreign exchange regulatory reform to promote capital account liberalization. The country's ODI position rose 10-fold during 2008-2018 (Box A3. Development of Thailand's ODI after the Global Financial Crisis), contributed by the expansion of both greenfield investment and mergers and acquisitions. Compared with other ASEAN-4 countries⁴⁸, Thailand's ODI position grew at the fastest pace during 2012-2017. Thai ODI in ASEAN, excluding Singapore, accounted for about 20 percent of total Thai ODI in 2017, with Vietnam as the top destinations followed by Indonesia and CLM countries⁴⁹ (Figure A2.6). Meanwhile, ODI in ASEAN made up 13 percent of Malaysia's total ODI and less than 3 percent of Indonesia's and the Philippines' total ODI.

Figure A2.5 Thailand's Regional Trade on Automotive Products



Source: Thailand's Ministry of Commerce; AMRO staff calculations

Figure A2.6 Value of Thailand's Cross-border M&A and Greenfield Investment Projects



Note: A breakdown of the data of Malaysia's direct investment position in Japan, Korea, Lao PDR and Myanmar is unavailable. Therefore, the data on Malaysia's investments in these countries is included in the rest of the world (ROW) category. Singapore and Hong Kong SAR are grouped together as a financial center.

Source: International Monetary Fund

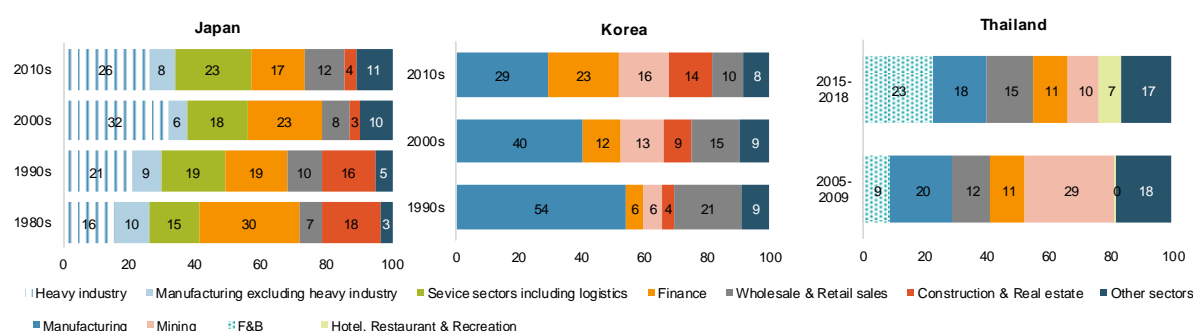
⁴⁸ The comparison does not include Singapore, as ODI from Singapore consists of Singaporean firms as well as non-Singaporean multinational enterprises that have a regional headquarter in Singapore.

⁴⁹ Although Singapore is also the top destination of Thai ODI, this analysis does not compare Singapore with other ASEAN countries. This is because this analysis aims to gauge real direct investment. Meanwhile, many Thai companies set up their affiliates in Singapore as its regional treasury center, not for their actual business activity.

24. Compared to the experiences of Japan and Korea, whose ODIs are mostly in the manufacturing sector, Thailand's ODI is concentrated more on food and beverage (F&B) as well as the retail trade, reflecting the country's comparative advantage. Japan and Korea invested overseas actively in the 1980s and 1990s respectively. In the early stage of active overseas expansion, Japan's and Korea's ODIs were dominated by heavy industries and energy generation (Figure A2.7). The second wave of overseas expansion was driven by finance and insurance, leisure and recreation as well as wholesale and retail trade. In the case of Thai ODI, the first decade of active overseas expansion, which took place from 2005-2014 after recovering from the Asian financial crisis, was dominated by the mining and electronic industries. The second decade, from 2015 onwards, has been driven by food and beverage firms, the wholesale and retail trade as well as hotels and restaurants. In addition, Thailand has also invested in the energy sector in Lao PDR and the garment sector in Myanmar and Cambodia.

25. Factors that drove the overseas expansion of Thai corporates varied across sectors. The objective of seeking resources⁵⁰ was the main reason that drove Thai corporates in the oil and gas sector, the mining industry and the power generation field to invest in neighboring countries such as Lao PDR, due to a depletion of domestic reserves of natural resources in tandem with rising domestic demand for energy. Market-seeking objectives drove Thai corporates in the retail and wholesale trade as well as F&B to open affiliates or acquire local players in other ASEAN countries with a growing middle class, especially Indonesia and Vietnam. The hotel business, meanwhile, mainly wanted to diversify its sources of income away from a sole reliance on tourists in Thailand. Besides market expansion, rising wages and a labor shortage in Thailand, a rich variety of agricultural produce in other ASEAN countries and a strong market penetration by Thai food in ASEAN were key drivers underpinning ODI in the F&B sector⁵¹. A labor shortage and rising labor costs in Thailand as well as attractive investment incentives in neighboring countries drove ODI in the electronics sector.

Figure A2.7 Share by Sector of Accumulated Outflows of Overseas Direct Investment



Source: JETRO; Bank of Thailand; Export-Import Bank of Korea; AMRO staff calculations

⁵⁰ According to Dunning (1993), four underlying factors driving a multinational corporation to invest overseas consists of resource seeking, market seeking, efficiency seeking and strategic asset seeking.

⁵¹ Cheewatrakoolpong et al. (2015)

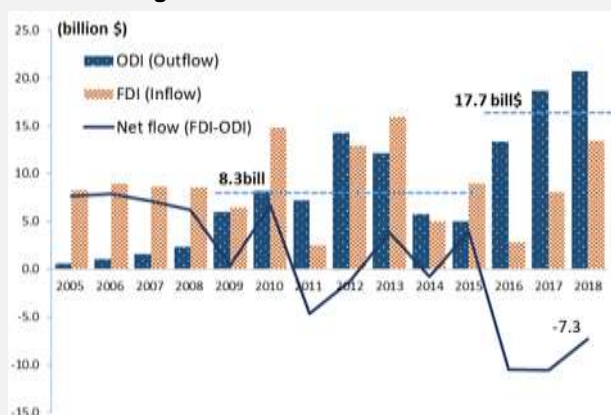
Box A2. Development of Thailand's ODI⁵² after the Global Financial Crisis

ODI from Thailand has grown at a faster pace during recent years, on the back of a large current account surplus and a search for yield by Thai corporates. Thailand's overall direct investment flow has registered net outflows instead of net inflows since 2016, although inward foreign direct investment (FDI) flows by foreign businesses continue to increase steadily⁵³. Thai ODI is expected to increase even further in the future. This note provides an overview of Thai ODI developments in terms of the investment sectors, destinations, and main driving forces from a regional perspective.

Outward direct investment (ODI) by Thailand corporates has trended upward strongly to seek market opportunities and locational advantages. Thai ODI has increased, on an annual basis, from USD 1.4 billion in 2005-08 to USD 8.3 billion in 2009-15, and has continued its upward trend at USD 17.7 billion in 2016-18 (Figure 1). As at Q1 2019, the total amount of Thai ODI stock reached USD 139.5 billion, making up 27.4 percent of GDP. By destination, ASEAN (29.1 percent) was the top recipient, followed by the EU (15.5 percent), Hong Kong (15.1 percent), Mauritius (7.5 percent), the U.S. (5.8 percent), and Japan (4.3 percent) (Figure 3). Most of destination economies seem to be attractive in terms of market opportunities and locational advantages, from the perspective of Thailand corporates. For example, ASEAN is a strategic destination because of its potential for market expansion, lower labor costs, and source of revenue diversification. The EU comes across as appealing in terms of new market opportunities. The Netherlands, Hong Kong, and Singapore are treated as FDI hubs, that is, as gateways to enter the EU, China and the ASEAN market, respectively. Mauritius is attractive as a tax haven and a gateway to India.

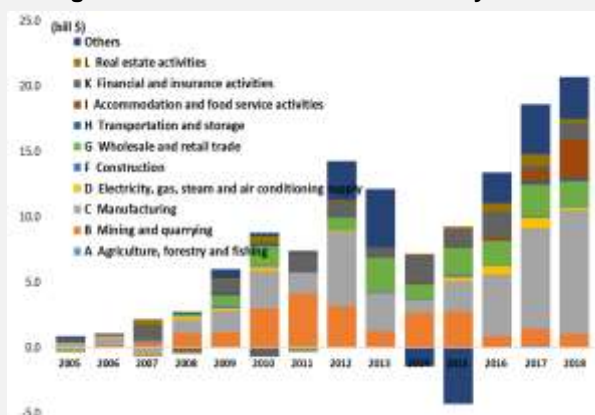
By sector, manufacturing such as food and beverage (F&B), chemical products, and wholesale and retail trade have consistently been the leading sectors in Thailand's ODI. Investment from manufacturing increased five times in 2010-18 compared with the pre-2010 period, from USD 4.2 billion in 2006-09 to USD 21.5 billion in 2010-18. Increases were also seen in the financial and insurance sector in 2014-16, and in the accommodation and food service sector in 2018, while the mining and quarrying sector moderated after 2016 (Figure 2). Specifically, within the manufacturing sector, F&B and chemicals products, and wholesale and retail trade have been expanding in CLMV countries.

Figure 1. Thai Direct Investment



Source: Bank of Thailand

Figure 2. Outward Direct Investment by Sector



Source: Bank of Thailand

Thai corporates are expanding their direct investments with a view to strengthening their businesses in the neighboring countries, and the Thailand government has been supportive. Thai ODI in Myanmar largely focuses on the textile industry, which is the backbone of Myanmar's manufacturing, while much of the ODI in Cambodia has been in the finance industry. Thai investment in Laos, whose economy is closely linked with Thailand, has been dominated by the finance, construction, and energy sectors. Vietnam's fast-growing economy has also attracted Thai ODI in its finance and retail sectors. Thailand's authorities are also promoting overseas investment by making it attractive to domestic investors. They expected such ODI to

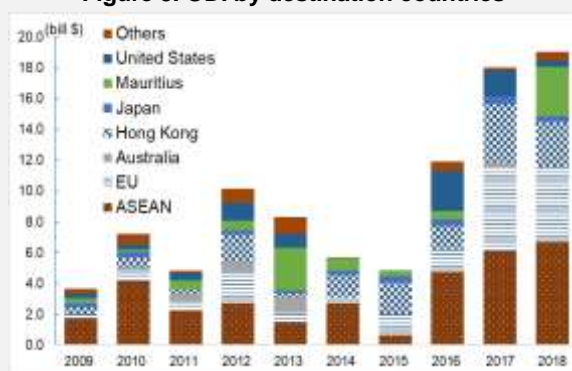
⁵² Broadly, Foreign Direct Investment (FDI) captures both inward FDI and Thailand's outward Overseas Direct Investment. In this box, ODI referred to Thailand's outward direct investment and FDI is used for inward FDI.

⁵³ FDI in Thailand has continued at 8.9 billion \$, on annual basis during 2005-2018. In specific, FDI in 2018 was 13.4 billion \$, which recorded high since 2013. It seems to be the benefits from the relocation of production base from China in terms of downward trend FDI into China past years.

benefit the domestic economy as well. State financial institutions, including the Thai Exim Bank, are providing support to domestic Thai investors.

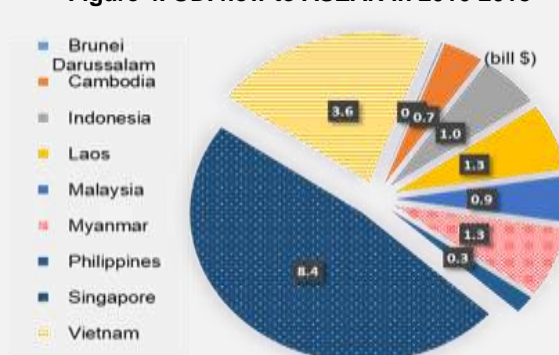
Thai ODI has been increasingly concentrated in the neighbouring ASEAN countries on the back of rapid growth in those markets. During 2016-18, ODI flows to ASEAN totalled USD 17.8 billion, accounting for 33.4 percent of total ODI flows. Within ASEAN, Singapore (48.2 percent) was the most popular destination, followed by Vietnam (20.8 percent), Myanmar (7.3 percent), Laos (7.4 percent) and Indonesia (5.6 percent) (Figure 4). Thai ODI to CLMV countries is driven by factors such as cheap labor, natural resources, and an expanding market with rising middle-income earners. On the push factors, an aging population, rising labor costs, and the recent strength of Thai baht have encouraged the relocation of production bases to the CLMV countries, especially among labor-intensive industries. On the pull factors, there are many geographical advantages in setting up companies in CLMV countries, which constitute a fast-growing economy and a sizable market. The average GDP growth rate is over 7 percent and the purchasing power of the middle class has been increasing rapidly. CLMV is a tax beneficial destination for investors in developed countries such as the US, and Japan. This has made CLMV a manufacturing production base. Natural resources and agricultural products in CLMV contribute 20 percent of GDP.

Figure 3. ODI by destination countries



Source: Bank of Thailand

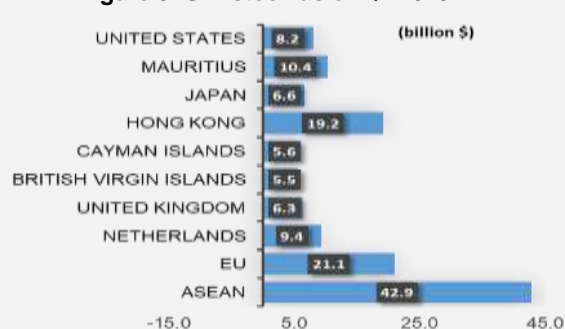
Figure 4. ODI flow to ASEAN in 2016-2018



Source: Bank of Thailand

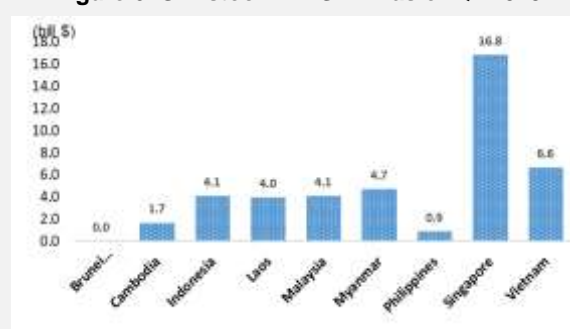
Thailand's trade with CLMV countries has also risen in tandem with increasing Thai ODI in the countries. Thailand's exports to CLMV countries stood at 12 percent of total Thai exports in 2018. Among the CLMV countries, Vietnam is Thailand's biggest trading partner, accounting for 45 percent of Thailand's trade with CLMV, followed by Cambodia (25 percent), Myanmar (16 percent), and Lao PDR (14 percent). Major Thai export items to CLMV countries include automobiles, machinery, electricity appliances, consumer goods, food and cosmetics. Thailand's imports from CLMV countries make up around 6 percent of its total imports. Major import items include natural gas, energy products, crude oil and agricultural products.

Figure 5. ODI stock as of Q1 2019



Source: Bank of Thailand

Figure 6. ODI stock in ASEAN as of Q1 2019



Source: Bank of Thailand

The expansion of Thai ODI has supported the regional value chain and regional growth. Thai corporates are expanding their investments overseas mainly by mergers and acquisitions, while green-field investments have been marginal. According to a SET survey in 2018, ODI methods and the proportions they take up, are classified as follows; takeover - 14 percent, share purchase - 53 percent, investment in joint venture - 13 percent (combined 80 percent), investment in subsidiaries and associated companies - 16

percent, and green field - 4 percent. Thai corporates, in expanding regionally, are also supportive of their place in the regional value chain, in particular, for the automobile sector. For example, Thai Summit Group, the biggest local auto parts maker, invested in Indonesia to supply auto parts to Toyota's subsidiary in that country. Some garment corporates that receive orders from Hong Kong make use of their production base in Myanmar. Capital outflows through Thai corporates' investments also help recycle Thailand's sizable current account surplus and support external stability. Moreover, ODIs increase the market values of the parent companies by generating more profits, and can help boost domestic goods export, production and employment through investment on intermediate and complementary goods that feed into the production abroad. A major concern is that it may also have negative substitution effects such as industrial hollowing-out and reduction in domestic employment. A report published by the Thailand Stock Exchange in 2019 was more positive about Thai corporates overseas expansion and claimed that there was little evidence about crowding-out effects by Thai ODI on domestic investments⁵⁴.

In the longer term, a further expansion of Thai ODI to neighbouring countries would not only support Thailand's growth but also help regional connectivity and capacity. Thai conglomerates and business groups are very active in overseas expansion, by leveraging on their competitive advantage, and branding and investing in countries that need their products, with developed sophistication in certain sectors in the past⁵⁵. Thai corporates have sought to reduce production costs, to expand their markets in the region to diversify from domestic maturing markets. Going forward, the deepening and expansion of regional direct investment could be a win-win strategy for the regional economies as it leverages on the complementary in the region. Furthermore, considering that Thailand is well placed at the centre of the mainland ASEAN sub-region, Thai ODI expansion that focuses on the neighbouring countries would enhance Thai businesses' overall competitiveness and productivity as well as regional connectivity and capacity.

Other Factors that Facilitate and Promote Economic Integration

26. **Thailand's large and persistent current account surpluses have enabled the country to export capital to neighboring countries** that still rely on FDI inflows to support economic development and finance current account deficits. At the same time, Thailand can recycle a significant part of its current account surpluses and its net savings by investing in neighboring countries. At the macro level, overseas investment will reduce the appreciation pressure on the Thai baht caused by a high current account surplus. At the business level, market penetration in neighboring countries with a growing middle class would diversify the earnings of Thai companies from the saturated domestic market.

27. **Free trade agreements (FTAs) and other initiatives to promote cross-border trade and investment would strengthen regional integration.** Currently, Thailand has 13 FTAs with 18 trading partners, including the ASEAN Economic Community and ASEAN's FTAs with Japan, China and Korea. In 2018, Thailand's trade with these trading partners accounted for about 60 percent of total trade and registered 11 percent growth, well above the 3.7 percent growth of the country's overall trade⁵⁶. Apart from the FTAs, the streamlining of Thailand's customs transit system over the last decade has also contributed to the expansion of the

⁵⁴ Patamaporn, N et al, "2018 Outward Foreign Direct Investment of Thai Listed Firms in SET", SET Research Paper 1/2019 underpinned that it cannot be concluded that Thai ODI has crowded out the domestic investment because domestic investment and ODI has changed in same directions since 2016 and the value of domestic investment was around 4 times of the ODI.

⁵⁵ CP group expanded F&B in China and ASEAN, PTT group invested oil and gas with joint venture on hydroelectric power in Laos, Central Group invested retail and malls, Indorama in petrochemicals invested LPG retail stores in Cambodia.

⁵⁶ In terms of future economic cooperation, Thailand is a member of Regional Comprehensive Economic Partnership, which is expected to be concluded by the end of 2019. The government is considering resuming its FTA negotiations with the European Union; participating in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership; and commencing the FTA negotiations with United Kingdom after Brexit is completed.

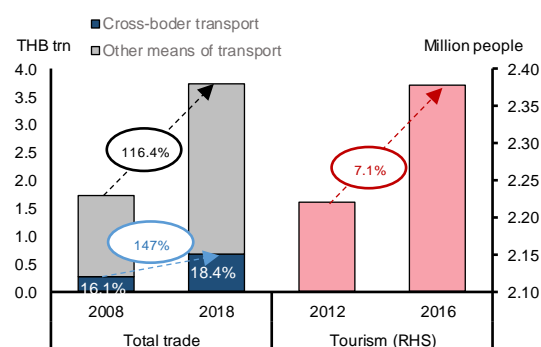
country's international trade. The streamlining efforts reduced customs processing time of exports and imports to 55 hours in 2019 from 14 business days in 2009, and replaced the initial paper-based operation by an electronic system. However, discussions with the private sector revealed that inefficient customs procedures as well as trade policy uncertainty in the neighboring countries have remained obstacles to regional trade and supply chain development.

28. Deeper financial linkages between Thailand and neighboring countries have spurred regional trade and investment. The expansion in intraregional bank networks covering cross-border bank lending and payments of Thai banks as well as global banks located in ASEAN, has facilitated and supported Thailand's intraregional trade and outward direct investment. In addition, financial linkages have also grown through the issuance of securities. Lao PDR and Myanmar have resorted to issuing Treasury bonds in Thailand to raise funding for investment projects while their domestic capital markets are still at a nascent stage of development. Going forward, ASEAN's ongoing efforts to connect payment and settlement systems among member countries and develop financial innovation such as the QR code and blockchain would help boost Thailand's economic integration with other countries in the region.

29. The expansion of transportation networks with neighboring countries has also underpinned rising economic activities.

An increase in air routes between Thailand and other regional economies' as well as an extension of road networks connecting southern China and northern Thailand, have led to considerable expansion in trade, business and a tourism boom (Figure A2.8). The bridges linking Thailand and Lao PDR as well as ferry services along the Mekong River have also boosted inland freight transportation and tourism activities in Southern China, Lao PDR and Thailand. Meanwhile, the bridge connecting Mae Sod in Thailand and Myawaddy in Myanmar is expected to encourage more tourist arrivals as well as more cross-border investments in the special economic zones (SEZs) of both countries.

Figure A2.8 Cross-border Activities



Note: 1/ Cross-border transport means the transport of products via roads and inland waterways. 2/ Trade data consists of Thailand's bilateral trade with southern China, Cambodia, Lao PDR, Myanmar and Vietnam. 3/ Tourism refers to the total number of Thai and foreign tourists travelling from and to neighboring countries, except Malaysia, through border checkpoints. 4/ Tourism data cannot be updated, as there was a change in data definition after 2016. Source: Thailand's Department of Foreign Trade; Thailand's Border Checkpoints; AMRO staff calculations

30. Establishing SEZs in the region could facilitate the processing of imported materials into exports and strengthen regional value chains. China's southern provinces, Cambodia, Lao PDR, Myanmar and Thailand have designated SEZs and industrial parks close to their borders. Examples are Kanchanaburi in the west of Thailand; Dawei in Myanmar; Mukdaharn in the northeast of Thailand; Savannakhet in Lao PDR; Srakeaw in the east of Thailand; and Poi Pet O'Neang in Cambodia. These SEZs are aimed at promoting and

facilitating supply chains between more sophisticated industries in Thailand and labor-intensive subcontractors in neighboring countries.⁵⁷

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⁵⁷ ASEAN+3 Regional Economic Outlook 2018.